THE LANCET.

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A Manual of Medical Jurisprudence, compiled from the best Medical and Legal Works, &c. &c., being an Analysis of a Course of Lectures on Forensic Medicine, &c. By MICHAEL RYAN, M.D., &c. &c. London. Renshaw and Rush. 1831. 8vo. pp. 309.

ON our first perusal of this volume, we felt so dissatisfied with its contents, that we determined on subjecting it to no critical analysis whatever, until a repeated and more deliberate examination had either corroborated or removed our original impressions. This rigid scrutiny having now been performed, we proceed to lay before our readers the reasons why we refuse the volume the least share of our approbation. It is a task which we fulfil with extreme reluctance from many motives which it would be perhaps impertinent to explain on this occasion, but which may find an apt illustration in the sentence prominently adduced by Dr. Ryan at the outset of his work; "Amicus Socrates, amicus Plato sed magis amica veritas." Such ever has been, such ever will be, the canon of our critical demeanour; and while we observe it honestly, carrying it into practice with a cautious, unbiassed, and unflinching hand, the progress of true medical literature will suffer not the least impediment from our strictures.

Dr. Ryan divides his work into three primary groups; the first of these professes to treat of the ethics of the medical profession; the second of the charters and statutes relating to the faculty; and the third, of "all medico-legal questions, with the latest decisions." To the first of these heads, including the introduction, four chapters (ninety pages) are devoted, in which the dignity of medicine, ancient medical ethics, the ethics of the middle ages, and the ethics of modern days, are consecutively discussed.

Did we speak of this department of Dr. Ryan's book in the condemnatory terms which even the mildest judgment would dictate, we should do violence to our feelings. The following morsel of absurdity, extracted from the first page of the introduction, will give our readers a partial specimen of the singular opinions which Dr. Ryan entertains:—

"It is now generally admitted that no system for the instruction of medical students can be complete that does not include a knowledge of state or public medicine, which renders the practitioner competent to discharge the various important duties imposed upon him by the *humane* and *unequalled* laws of this empire."

Humane and *unequalled!* In the name of common sense, was the author in a state of somnambulism when he penned the expressions? And mark.—Dr. Ryan's words, taken in their strict grammatical context, extend to all the laws of this realm, to the game laws, the forgery laws, &c. We acquit him, however, of lauding these and similar examples of legal iniquity, and we will suppose that he alludes to those statutes alone in the operation of which the medical practitioner is concerned. That these are unequalled, indeed, cannot be denied; but for what? To answer the question, we should understand to which division of the medical code Dr. Ryan's compliment applies. Is it to that which regulates the divisions of practice, and which, in its unparalleled humanity, inflicted a heavy penalty on Mr. Ryan of Maidstone, for alleviating the maladies of a suffering patient, almost at the same moment that it gave license and immunity to an atrocious, manslaughter-

ing empiric? Surely it cannot be. To what then does the author allude? Is it to the law which disinherits the offspring which the Cæsarian operation has preserved, or to that which commits the examination of supposed pregnant convicts to a jury of twelve matrons? We need not pursue the catalogue any further. Erroneous in almost the entire of its physiological data, negligent in the correction of its numerous errors, anomalous, perplexing, and contradictory, in most of its provisions, and totally deficient in in all that relates to medical police, the British laws are indeed unequalled; but they are unequalled for the antithesis of all the perfections Dr. Ryan supposes them to possess.

Before we proceed many pages further, another circumstance occurs, which, had Dr. Ryan himself detected in another author, would have subjected the culprit to his severe animadversion. We allude to the unacknowledged transfer to Dr. Ryan's pages of several of the best and most powerful sentences in Dr. Christison's beautiful introduction to his Essay on Poisons. Not even an inverted comma marks the transmigration, and the internal evidence of wilful spoliation is further corroborated by the occasional alteration of a word, the addition or omission of another, and the transposition of the sentences in question. It moreover unfortunately happens, that these alterations are far from being an improvement on Dr. Christison's text. The parallel passages here alluded to stand as follows:—

Dr. Christison's Introduction, pp. 1, 2, 3, 4.

"The object of the science of toxicology is fourfold. It supplies antidotes for the various poisons; it furnishes the physiologist with valuable instruments of research in his investigations into the laws of the animal economy; it aids the physician in his inquiries as to the action of many energetic drugs; and it collects from the numerous branches of medical knowledge, as well as from collateral sciences, the materials of the most important department of medical jurisprudence.

"It is only since toxicology began to assume an accurate and systematic form, and chiefly since it was matured by the indefatigable labours of Orfila, that the physician can truly say he has been in possession of antidotes. It is to the modern toxicologist that he owes the discovery of the virtues of albumen as an antidote for corrosive sublimate and verdigris,—of bark for tartar emetic,—of the alkaline sulphates for sugar of lead,—of the alkaline and earthy chlorides for liver of sulphur,—of ammonia and chlorine for prussic acid; it is to the toxicologist that he is indebted for ascertaining the superiority of magnesia and chalk over other antidotes for the mineral acids and oxalic acid, and the superiority of vinegar or oil for the mineral alkalies. It was also a toxicologist who first proposed the application of the stomach-pump in the treatment of poisoning. These, however, are far from being the only advantages which have been derived from applying this science to the discovery of antidotes. The study of poisons, in their relations to chemistry and physiology, has in the course of a few years expelled from the practice of medicine a host of popular remedies,—the

Dr. Ryan's Introduction, pp. 4, 5.

"If we only advert to toxicology, one of the minor branches of state or public medicine, we shall find it has done more for the elucidation of the actions of medicines, than all the other branches of medicine. It is to it we owe our knowledge of the actions of the different kinds of poisons, as well as their antidotes; and the exclusion of a host of popular remedies, many of them useless or injurious; and to it we stand indebted for the grand discovery of the bad effects of former antidotes, many of which only increased the noxious action of poisons. It was the toxicologist who discovered the virtues of albumen as an antidote for corrosive sublimate and verdigris;—of bark for tartar emetic;—of alkaline sulphates for sugar of lead;—of alkaline and earthy chlorides for liver of sulphur;—of ammonia and chlorine for prussic acid;—of magnesia and chalk for mineral and oxalic acids; and vinegar and oil for the mineral alkalies. It was he also who pointed out the bad effects of former antidotes, as the alkalies in poisoning by arsenic and oxalic acid; the acetic acid in poisoning by opium and other narcotics; and the salts of copper and alkaline sulphurets for arsenic and metallic compounds; and of fixed oils in poisoning by lytta or cantharides. It was he who first proposed the application of the stomach-pump in the treatment of poisoning, and discovered the splendid operation of transfusion. By his investigations he has laid

offspring of hasty empiricism,—which, instead of being beneficial, were often not only useless, but even absolutely hurtful. Not to mention the many inert remedies which have thus been consigned to oblivion, I may refer to the late discovery of the bad effects of the alkalies in poisoning with arsenic and oxalic acid,—of the alkaline sulphurets in poisoning with arsenic and other metallic compounds,—of the acetic acid in poisoning with the salts of copper, or with opium and other narcotic vegetables,—and of fixed oil in poisoning with cantharides.

"Besides thus discovering many antidotes, and proving the inefficacy of others, the toxicologist has advanced a step further still, and has saved the physician much unnecessary labour in future, by laying down the general principles by which the search for new antidotes must be regulated.* * * *

"I have likewise said, that the science of toxicology aids the physician in his inquiries into the action of remedies. Many of the most valuable remedies for combating disease being in larger doses violent poisons, their action as poisons in some instances, though certainly not in all, throws light on their action as remedies. Thus the direct paralysis, which is produced by opium in the muscular fibres on which it is applied, furnishes an explanation of its influence in spasmodic affections of the bowels. The same paralysing property of sugar of lead appears to account for the beneficial influence of that substance in dysentery. * * * * * Nux vomica, it is true, was long used in medicine empirically in various diseases. But it is only since the observations of Magendie and Delille, on its singular power of irritating the spinal chord and nerves, that it has been systematically and successfully resorted to in the treatment of various forms of palsy."

We need offer no farther remarks on the above parallel, than to observe the singular discrepancy that exists between the two authors on the subject of toxicology, which is designated, correctly we believe, by Dr. Christison, as "the most important" department of medical jurisprudence; while Dr. Ryan cavalierly treats it as a "*minor*" branch of that science. But we all have our hobbies, and perhaps Dr. Ryan considers *gynæcology** and *paidonosology* as far more serious objects of legal medicine. Indeed, the extremely ample space allotted to these topics in the sequel of the Manual, confirms this opinion, to a certain extent.

* Quære?—*Printer's Devil.*

down unerring rules for the direction of those who may henceforth laudably endeavour to discover new antidotes. * * * * * These and many other of our most potent and valuable remedies in large doses are poisons, and this fact has been highly conducive to the discovery of their effects as therapeutic agents. In confirmation of the validity of this position, I may observe that the direct paralysis caused by opium when applied to muscular tissue, explains its efficacy in spasmodic affections. The similar effects of acetate of lead explain the efficacy of that medicine in dysentery; the stimulating effects of nux vomica on the spinal chord and nerves, led to its employment in the various forms of palsy."

We pass over some other passages to which, had we time and space sufficient, we should be induced to advert more minutely, and proceed to the chapters on ethics, which chiefly consist of a somewhat-condensed compilation from the works of Drs. Gregory and Percival, and other persons of less note, interspersed with occasional *jeux d'esprit* (we know not a more descriptive word) by the author himself. Here we confess, did not Dr. Ryan's peculiar mode of expression guide us in some degree in the affiliation of the paragraphs which we suppose to be his own productions, we should be puzzled to ascertain what was original or what compiled. This difficulty especially

occurs in the fourth and fifth chapters, where, perhaps by mistake, but certainly most injudiciously, "the use of inverted commas is too frequently neglected." * The extracts we proceed to quote are, however, we feel pretty sure, only chargeable to the author himself.

The first sentence will forcibly arrest the attention of our readers:—

"*Some on account of friendship or acquaintance expect attendance gratuitously*, BUT THESE ARE WORTHY OF NEGLECT. In all cases the best remedies ought to be employed; and the reward should be consonant to the custom of the faculty, and to the wealth or means of the sick. *In some cases aid is to be afforded gratuitously*, WHICH WILL ENSURE MORE RENOWN THAN IF REMUNERATION HAD BEEN AWARDED."—p. 13.

If this be an axiom in medical *ethics*, we care not how quickly the works on that subject are walled up with their coadjutors in the "black art," ensconced by episcopal edict behind solid brick-work in the library of Dublin. We trust there does not now exist a medical practitioner of any character so callous, obdurate, avaricious, and unchristian, as to act on the selfish precepts here laid down.

We are not quite sure whether the next passage we shall quote, belongs to Dr. Ryan or not; there are, it is true, no "inverted commas," but as these may have been accidentally omitted, we will venture to suppose that it is at least very unlikely that any modern physician could, in his sober senses, or even in a lucid interval, have penned such a specimen of the sublime and ridiculous as the annexed description of the subjects of medical study:—

"It nearly extends through the whole range of the creation; and no other profession requires so extensive a knowledge of the works of Providence. The objects which engage the attention of the medical practitioner are the properties of the sun, moon, and heavenly bodies, the laws of their uninterrupted revolutions and various movements; the various productions of the earth, including the vegetable and mineral kingdoms, the innumerable variety of living creatures that fill the air, the earth, and the waters, and the microcosm of the human body, with its wonderful organs, functions, and immortal principle."—p. 14.

* We do not borrow the sentence from *Dr. Ryan.*

Closely pressing on the heels of the preceding paragraph, follows a furious diatribe against materialists, atheists, and phrenologists, all which terrible persons are curiously amalgamated into an identical trinity.

"The doctrine of the materiality and mortality of the soul, which is that of materialism and phrenology, should for ever be exploded as totally false, and unworthy of all regard, as subversive of the fundamental principles of all religions, as introducing civil anarchy into the political economy of legislation, as substituting disorder for harmony, despair for hope, and eternal darkness for everlasting light. * * * Such are the consequences naturally resulting from the principles laid down in phrenological writings. * * * Of what benefit to humanity would be the establishment of phrenology? We answer none; but, on the contrary, the greatest injury. If any man be so unhappy as to work himself into the conviction that his soul is a function or a secretion of the brain, and of course must perish with it, he would still do well to conceal his horrid belief with more secrecy than the Druids concealed their mysteries. * * * Whence this eagerness to propagate systems, the tendency whereof is to slacken the reins that curb the irregularity of our desires and restrain the impetuosity of our passions?

It is hard to treat of such consummate nonsense in a serious vein. How much longer will men, departing from the calm precepts of rationality, abandon their minds to childish prejudices, and their pens to the propagation of the most atrocious calumnies against those from whom they differ in opinion? When Harvey discovered the circulation of the blood, the cry of "Atheist" was hounded after his footsteps; when Galileo deciphered the language of the stars—when Martin Luther opened the book of reformation—their fate was yet worse; there neither were tongues nor pens wanting to misconstrue the calculations of Newton into an overt denegation of the existence of a Supreme Being; and now, when Gall, and Spurzheim, and Coombe, and Elliotson—men whose lives were and are beyond reproach, as pure at least as those of the medical iconoclasts who hurl their declamatory missiles at their heads—when these men come forward, and in the plenitude of learning, philanthropy, and true religion, propound the firm data of a new, and, in its broad facts, most use-

ful science, up springs Dr. Ryan, and despising argument and facts beyond contradiction, utters the silly howl of Atheism against them. Dr. Ryan should know the vulgarity, to say the least of it, of this petty resort of all confounding dogmatists. Whenever an ill-informed and shallow writer feels the ground of reason and truth sinking beneath his feet, he tries to avert his fall by catching hold of and dragging down the character of his opponent. Nor is the artifice without a transient triumph. The crafty disputant knows how readily mankind are prejudiced by a name, and in nearly the same spirit and expectation that induce a burglar to accuse the watch-dog of hydrophobia, he fixes the libel of "Atheism" on the philosopher, whom the world, for a season, then cuts off. Truth, however, is certain, though tardy, in its progress; and the phrenologists have at least this consolation, that idle and noisy declamation never yet made a rational man the enemy of correct, or the proselyte of erroneous, opinions.

We are unwilling to encroach unreasonably on our readers' patience by additional extracts, but we owe it to the author not to condemn him without stating fully the grounds of our disapproval. In the section on Ethics, therefore, one or two subjects still remain to be noticed. The first of these relates to the propriety or impropriety of making clinical experiments with new remedies. Will it be believed, even by those who see it with their own eyes, that Dr. Ryan maintains the extraordinary position, that such experiments are unjustifiable, and not to be practised?—

"But if he administered a dangerous medicine, merely to gratify his own curiosity or zeal for science, to ascertain the comparative advantage or disadvantage of some new remedy, either proposed by himself or suggested by others, he is held guilty of a breach of ethics and of a high misdemeanour, and a great breach of trust towards his patient; and if the patient died, I apprehend he might be severely punished. * * * * It must be admitted, that men who would try experiments upon themselves would be very apt to try experiments on their patients. It is a melancholy truth, but cannot be denied. The profession, however, has always reprobated such conduct, and the medical phrase of reproach and contempt for it, "*Corio humano ludere*," To play with the human hide,—abundantly testifies in what abomination it has been held by the faculty. It is unnecessary to dwell upon this point in this age, *because all experiments are made upon the inferior animals*; and the just reproach entertained by the faculty, in former times, is now inapplicable."—p. 57.

Is it possible, that Dr. Ryan can be so ignorant of the most familiar facts in the history of his profession, as to be unaware that to the experiments which he repudiates are we indebted for the discovery of the uses of many, and the confirmation of the therapeutic effects of all, our remedial agents? Bark, opium, mercury, iodine, and one hundred others which we need not enumerate, all exemplify this established, incontrovertible, fact. Again; as to the performance of *therapeutic* experiments on the *inferior* animals—such a thing is scarcely heard of. We investigate the *physiological action* of a substance, by administering it to *a healthy* animal in *poisonous* doses. But, from the absence of the pathological condition, therapeutic indications can seldom indeed be collected. In the first place, most of the diseases, tertian ague for example, against which specifics have been discovered, do not occur in the lower animals. It follows, then, that had Dr. Ryan been a legislator some centuries back, the efficacy of quinine and, *a multo fortiori*, of arsenic, would have still remained unknown, and the tertian might have continued to depopulate the world. It would be an easy matter to pursue this subject much further did the absurdity of the topic permit us to indulge in such profitless speculations.

The remaining parts of the first section contain little more that requires comment. In his indiscriminate habit of quoting without commas, the author has given vent to some of Dr. Grattan's abuse of general practitioners, a feeling which subsequent parts of his pages tend to contradict or soften down.

Such is a specimen of one-third of Dr. Ryan's volume. Of the second section (28 pp.) we need not speak at any length, it being merely a skeleton view of the principal laws relating to the medical profession, and compiled from Mr. Wilcocks' volume of that title.

To the third head, or that strictly appertaining to the subject designated by the somewhat vague appellation of medical

jurisprudence, the remaining fourteen chapters are assigned. Without any regard to classification in his arrangement, the first six of these are devoted by the author to the obstetric department of the subject; and we accordingly find impotence and sterility, utero-gestation or pregnancy, abortion, delivery, infanticide, and female violation, consecutively discussed in *seventy-three pages, copied verbatim from the author's "Manual of Midwifery."* The remaining chapters are devoted to the consideration of

1. Attempts against health or life, 18 pp.
2. Homicide by asphyxia, 10 pp.
3. Medico-legal history of poisoning, 56 pp.
4. Adulterations of alimentary matters, 10 pp.
5. Mental alienation, 5 pp.
6. Simulated, pretended, dissimulated, and imputed diseases, 3 pp.
7. Disqualifying diseases, 3 pp.
8. Age and identity, one-quarter p.!

Lastly, medical evidence, and forms of certificates, 11 pp.

Had all the preceding subjects been discussed in the very best manner that condensation would permit, the book would be almost useless as a manual of medical jurisprudence, by the singular omission of the very leading principles of that science—namely, the physiology of the causes of sudden death, without a clear knowledge of which, no question involving an accusation of homicide can be correctly investigated. Not a word is said of the means of distinguishing between real and apparent death! The osteology of the skeleton, a point of vast importance, is equally neglected. Wills and survivorship are also passed over. In the observations on drowning, no notice is taken of the formation of adipocere, or of the progress of putrefaction under water—both points of signal consequence, and which have more than once contributed to the decision of medico-legal inquiries. Orfila's and Lesueur's splendid labours on judicial exhumations, and the influence of interment on the pathology and chemistry of forensic medicine, are also overlooked altogether. Other subjects, of nearly equal importance, have received the same treatment.

Does this work then deserve the confidence of those who require a manual of medical jurisprudence for practical purposes? Certainly it does not. Suppose then that we look on its chapters as separate essays merely bound under the same cover, what are the character and value of the individual articles? Our reply may be briefly expressed. The obstetric chapters are indisputably correct in all their important particulars, but the language in which some of the delicate topics are described, is little short of disgusting, from the glowing pruriency of the terms employed. We repeat, however, that these chapters are word for word extracted from another book by the same author. We should not object to this, had not Dr. Ryan thought proper in his "Medical Jurisprudence," p. 135, to speak of the circumstance in the following terms:—

"For the better understanding of this important subject, it will be necessary to describe the signs of conception and pregnancy, including spurious, extra-uterine, false, pretended and concealed utero-gestation, superfœtation or second conception, abortion, natural and provoked, duration of pregnancy, recent delivery, survivorship of parent or offspring, viability of infant monsters; and, lastly, *prolicide, fœticide, infanticide.* These, and all other medico-legal questions relating to obstetricy, I have *fully* discussed in my work on Midwifery, a plan adopted by foreign writers, but as yet neglected by the writers of this country. I shall notice them AS CONCISELY AS POSSIBLE on the present occasion."

What would the reader imagine from the preceding passage? Why, that he could obtain additional information from the Manual of Midwifery. What then will be his surprise, on turning to that work, p. 241, to find the following passage:—"In the foregoing dissertation, I have *only discussed the principal points* which claim attention in cases of *infanticide; many more particulars will be found in my work on Forensic Medicine,* especially in the article on homicide, where the danger and mortality of wounds, contusions, and fractures, are *duly* considered."

Again, the chapter on asphyxia is extremely deficient in some important points, and equally erroneous in others. Death by incomplete suspension, as in the case of the late Duc de Bourbon, which has recently excited so much discussion between Messrs.

Marc and Dubois, is not mentioned. The curious cases of Burke's victims, and the admirable and instructive investigation of the subject by Dr. Christison, are also passed over. Under the head of asphyxiating gases, the utmost error and confusion abound. For example, p. 217—

"*Asphyxia by sulphurous acid gas, nitrous hydrochloric, ammoniacal, arsenical gases, hydrogen*, CARBURETTED HYDROGEN, *muriatic gas, and chlorine.—All these gases are irritant*, inducing cough, suffocation, vivid pains in the chest, sometimes hæmoptysis, and always mucosities in the bronchi. *They act negatively, or by a defect of oxygen.* When death approaches, there is hiccup, rale, great pain in the diaphragm, convulsive motions, delirium and inexpressible agony. The cause of death is irritation of the mucous membrane of the bronchi. The nitrous oxide, or laughing gas, protoxide of azote, destroys life in this manner."

The words in italics preclude the necessity of our pointing out the confusion at greater length.

The chapter on toxicology is, when contrasted with its predecessors, perhaps the best in the volume, being almost exclusively a condensed analysis of Dr. Christison's work, and of the papers published in this Journal in review of that publication. The value of the whole, however, suffers considerably from the following unlucky and laughable definition of the term "poison," which Dr. Ryan himself proposes:—

"*Homicide by Poisoning.—The name of poison is given to* ALL SUBSTANCES *which, when applied to the organs of the body*, CAUSE DEATH."

According to this definition, fire and boiling water are poisons; and the man who dies by the application of a rope to his neck, or of a Burking plaster to his mouth and nostrils, is poisoned!

The remaining chapters scarcely demand a word. That on the adulterations of alimentary matters is an indiscriminate analysis of several pamphlets, honest and *dishonest*, on this favourite topic for quackish declamation. The number of pages occupied by the chapters on diseases dissimulated, pretended, &c., on age and identity, and on disqualifying diseases, is sufficient to show that they can be of no practical utility. The notice of mental alienation is taken from a published lecture by a Mr. Amos, and is correct as far as it goes, but whose general incapacity for discussing the subject of medical jurisprudence has been amply shown in this Journal.

Lastly, the concluding chapter on medical evidence is valuable, on account of the printed forms it supplies of the certificates occasionally required in the effecting of insurances, exemption of jurors, committal of insane persons, &c. &c.

We have now performed our disagreeable duty, and take leave of the author with regret that we should have had occasion to pass these criticisms on his work.

INTRODUCTORY ADDRESS

TO A COURSE OF

CLINICAL DEMONSTRATIONS,

Delivered at the

WESTMINSTER HOSPITAL,

By Mr. D. O. EDWARDS,

On Friday, October 15th, 1831.*

GENTLEMEN,—Systematic lectures on the theory and practice of medicine, have for many years been delivered in this country. This mode of instruction possesses many advantages. The vivacity of vocal language excites and keeps up the attention of the student, whose spirit would otherwise necessarily flag under the tedium of continual reading. A greater quantum of instruction may, by a recourse to this means be acquired in a given time, than by the solitary exertions of an individual. The recurrence of the lectures at regular periods impresses a habit of order on the mind in its scientific pursuits; and the teacher is enabled in his colloquial communications to introduce a variety of curious information which could not be conveyed in the formal garb of a treatise. These are *some* of the benefits derivable from oral instructions. The information imparted in this manner by the systematic lecturer, may be likened to a geographical map, in which a very abstract idea of a country is conveyed; its general figure and extent; its bearing to other

* The physicians of the Westminster Hospital having deputed Mr. D. O. Edwards to superintend the clinical instruction of the students, that gentleman, on Friday the 15th instant, delivered a lecture introductory to a course of what he designates "clinical demonstrations." These demonstrations, we understand, will take place every Monday and Thursday, at one P.M.—ED. L.

countries, and to the entire surface of the globe; its grand and subordinate divisions, and the relative position of its rivers, mountains, and towns, may be accurately enough described, but the traveller who should have no other guide than such a map, would be continually embarrassed in his career. Obstacles would arise almost at every step, and a laborious calculation would be necessary in order that his scanty *general* knowledge should be made to bear upon the *particular* circumstances of his situation. The accounts of preceding travellers would certainly relieve many of his difficulties, but even with such assistance his path would be strewn with thorns, and his progress would be slow.

So in medicine, the practitioner who launches into life with no other preparation than that afforded by systematic lectures and by books, would be constantly at a loss. Not being *personally* acquainted with disease, every case that occurred would require a long process of reasoning to prove its identity; and where so many items are to be taken into the account, the liability to error will be manifest.

These copious sources of unnecessary anxiety and labour have of late occupied the attention of medical men, and means have been devised for their removal. The map of the geographer and the book of the traveller, though excellent in their kind, and indispensable to success, are not deemed sufficient in themselves, and the aid of the *travelling tutor* has been recommended. The difficulties of the young physician and surgeon in the commencement of their career, arise from their unacquaintedness with particular maladies, and to obviate this inconvenience it has been thought necessary to introduce them to the bedside of the patient, and to explain to them the origin, progress, resolution, and distinguishing characters of individual diseases. To this method the appellation of clinical lectures has been given, but I prefer that of *clinical demonstration*. The business of the formal lecturer leads him to treat of general principles, to marshal out into regular system the various facts of which medical knowledge is composed, to explain the causes, forms, and relations of disease, to elucidate the various theories which have at different times instructed or deluded mankind; in short, to make a map of the science. The duty of the clinical demonstrator is of a different kind; he has to point out the *facts* upon which the *theories* of the professor are founded, to show the habits of *actual* disease, and to demonstrate their subserviency to especial laws. These two functionaries stand exactly in the same relation to each other as the lecturer and the demonstrator of anatomy. The lecturer arranges his subject according to a certain *system*; the demonstrator produces the various facts of anatomy as they exist *in nature*. The one like the geographer, furnishes the general outline of the science, the other like the travelling tutor, accompanies us in our progress, makes us acquainted with the peculiarities of each province, the nature of the soil, the works of art, and the character of the inhabitants. The general idea communicated by the first, though beautiful in itself, and absolutely necessary to the completion of our design, is much more faint and transient than the vivid impressions afforded by actual observation. The geographer and the traveller may, for example, furnish us with tolerably correct notions of the extent, situation, fertile soil, and genial climate of Greece or Italy; but how indistinct and evanescent are these notions when compared with the vivid and durable impression made on the imagination by viewing with our own eyes Athens or Rome with all their rich historic associations! The nosologist lays out the extensive region of disease into class, order, genus, and species, as the geographer divides a kingdom into provinces, counties, hundreds, and tithings; each may be minute and methodical in description, but the knowledge conveyed, unless improved by personal inspection, must be indistinct. Thus, Dr. Cullen describes the disease erysipelas vesiculosum, as belonging to the genus erysipelas, the order exanthema, and the class pyrexia, and defines it thus:—"Synocha duorum vel trium dierum, plerumque cum somnolentia, sæpe cum delirio, in aliqua cutis parte, sæpius in facie, phlogosis erythema; rubedine serpente, latum spatium occupante, et locis ejus quibusdum in vesiculas magnas abeunte." This is without doubt a very precise definition of this affection, but how infinitely inferior in correctness and durability is the image it impresses on the mind, to that imparted by even one view of the disease itself! The one is dimly apprehended, and soon forgotten, the other is as lasting as life itself.

Influenced by a conviction of these truths, the regulators of medical education in this kingdom have recommended that clinical instruction should form a part of the student's exercises; and the physicians of this hospital have done me the honour of intrusting a share of this department to my superintendence. I do not, however, pretend to assume the important character of *tutor*. My utmost ambition is to be your travelling *companion* in the extensive and beautiful region of medical science.

Before setting out on our tour, it would be prudent to procure the best map of the country, the best book of travels, and always to avail ourselves of every information

to be derived from conversation. As general guides in medicine, I do not know any better than the works of our countrymen, Dr. Cullen and Dr. Good. There are certainly serious objections to both, but with a little precaution we may avoid all material errors. No person's conversation is to be entirely despised. The trigonometrical surveyor in all the glory of his mathematics may be materially assisted by the local knowledge of a peasant, and we know that the gigantic plans of Napoleon, involving the fate of empires, have often been modified by the information elicited from a clownish guide. Hence we may safely deduce this principle, that there is no rational being in the wide world, however ignorant he may ostensibly be, who has not some knowledge peculiar to himself, and who, consequently, may not in that respect become our instructor.

Too much deference to authority is a fault not less to be deprecated than too much confidence in oneself, and our progress will be as much impeded by an implicit dependence on the opinions of others, as by our own rash and unsupported inferences. We are to guide ourselves, as far as possible, by the golden mean, and equally to shun the Scylla of credulity and the Charybdis of scepticism. We are to see with our own eyes, hear with our own ears, and judge with our own understandings; and whilst we make use of the labours of our predecessors, we should honour them whenever they promulgate the truth, without falling into a blind imitation of their errors. Being thus supplied with a few maxims to guide our conduct, let us endeavour to form a general idea of the objects of our research.

Medicine, in its most extensive sense, is the art of alleviating or removing the physical evils of life, and the practice of this art requires an intimate acquaintance with all the circumstances which influence the welfare of this principle. The notions we annex to the word *life*, like those we attach to the terms *matter* and *mind*, are merely relative. If we are asked what is meant by *matter*, we can only explain ourselves by enumerating its qualities, such as extension, figure, colour, motion. Of mind we can but state its attributes, that it is that principle which feels, thinks, and wills. The case is exactly similar with *life*, we only know it by its properties, such as growth, definite form, decay, and death. Its essence eludes our faculties, and we can no more form an idea of it than we can of the essence of mind or matter. This mysterious principle exists under a variety of forms. Its most simple existence is that of the vegetable, in which it exhibits fewest of its properties. Assimilation of inorganic matter to its own nature, growth, definite form, absorption of juices, circulation, perspiration, and so forth. In the animal there is a greater development of powers: assimilation of organic matter to its own nature, absorption, circulation, secretion, definite forms, generation of heat, respiration, sensation, locomotion, procreation, intelligence, and moral affections. This multiplication of powers is gradual from the lower to the higher animals. Lastly come the properties of life peculiar to man. In him they are more numerous and complicated than in the lower animals. And we find the operation of these powers modified by the influence of a new principle—the mind, whose phenomena however are easily distinguished from those of life, and which are governed by different laws. The evidence respecting these principles is drawn from different sources; our knowledge of the attributes of mind we derive from consciousness, whilst our knowledge of the properties of life results from observation. But though it is important that we do not confound the nature of these two principles, we may, as physicians, with advantage study the laws which regulate their union, without attempting to explain the nature of the link which unites them. In this point of view the following, amongst others enumerated by Dr. J. Gregory, become legitimate objects of speculation:—

1. The laws which regulate the phenomena of the senses.

2. The history of the various circumstances in parents which have an influence on conception, and the constitution and characters of their children.

3. The history of dreams.

4. The laws of custom and habit.

5. The laws of memory in so far as they are connected with the state of the body.

6. The history of the different species of madness, and, in short, all the phenomena which arise from the union of mind with the living body.

The researches of geologists have thrown an interesting light on the *antiquity* of the vital principle. The fossil remains which have been discovered in the various alluvial strata, show that this principle acted at a period so distant that the powers of the imagination cannot appreciate it. Petrified skeletons of animals of the lizard kind have been discovered, but they are of such gigantic size, as, in general, greatly to exceed the living creatures now known to exist. The marks of violence every-where evident on the surface of this globe, plainly demonstrate the existence in former times of principles of motion which now lie dormant, and these colossal remains of animated nature form interesting monuments of the rough organisation necessary in those early times to meet the exigencies of life.

Happily for us the mechanical and chemi-

cal principles now in operation on the surface of our earth, are consistent with the welfare of the *finest* organisation, and we, consequently, trace the action of the vital principle through the most delicate and beauteous forms of being. What can be more frail or beautiful than the structure of a bee or a wasp, which yet preserves a perennial existence—indeed the whole of the animal and vegetable kingdoms afford ready illustrations of this truth.

Life, in all its various forms, presents itself to the physician, either operating according to certain laws of form and function, which is called health, or deviating from these laws, which constitutes disease. Now these deviations do not occur at random, neither are they explicable on any principle of mechanics, or chemistry, or of intelligence, but they are effected by distinct laws peculiar to themselves, and deducible from certain causes. The illustration of the laws of health constitutes the subject of physiology; the illustration of the laws of disease is that of pathology; the connexion between health and disease is very manifest, since they are but modifications of the same functions. Whenever, therefore, the healthy operation is evident, the action of disease may also take place, and we accordingly find that every form of living being, vegetable, animal, and man himself, is liable to disease. There is an analogy amongst the morbid affections of all these classes exactly in proportion with the analogy of their structure and function. A familiar example of this is afforded in the effect of a laceration on vegetables, the injured surface is much longer in recovering its healthy condition than in the case of an incised wound. The case is exactly similar in man and in the animal kingdom. But though these analogies are highly useful in throwing light upon the affections of the human frame, in the same manner as comparative anatomy illustrates its healthy functions, our business on the present occasion is confined to the diseases of man.

I have endeavoured to follow the operation of the living principle in all forms; as it is my purpose to prove not only that it is analogous or similar in its effects in every kingdom, class, genus, and species of life, but that it is identical not only in every individual of the same species, but in every species of the same genus, and in every genus of the same class. Thus the whole of living nature may be fantastically represented as a pyramid, the basis of which is the vegetable kingdom, and the apex man. As we rise from the basis to the summit, we find a gradual superposition of new functions, and thus we ascend from the simple physiology of a plant to the complicated structure of the human frame. All the principles which actuate the existence of the plant, are to be found in combination with new powers, in the economy of animals, and this again forms a constituent part of the human system. The life of the human ovum at the moment of impregnation, and that of the unincubated egg, are as purely vegetal, as the life of the mustard seed. They all maintain for a time a dormant existence, and when placed in appropriate situations, extract nourishment from surrounding juices, and progressively assume their characteristic forms. The human subject, in its growth from embryo to fœtus, and from fœtus to adult, takes on successively the forms of vegetal, animal, and human life, and illustrates beautifully the consecutive development and gradual superposition of the vital functions.

I think it of great importance to prove the universal identity of the vital principle, because I believe the stability of medicine to rest upon that universality. The same laws which regulate the growth of the human form from its first rudiment in the womb, to the attainment of its full perfection, operate equally at all times and in all places: in China and America they have acted upon the same model, as far back as tradition or history reaches, and are equally uninfluenced by the arctic circle or the torrid zone.

In plants and animals, certain modifications are induced by change of soil and climate, but these are ascribable to definite causes, and may be allowed for in any scientific calculation.

Since the science of medicine is fixed upon so immutable a basis as the unvarying laws of life, how shall we account for that chaos of false doctrine with which we are surrounded? The nature of medicine is as clear and well defined as that of any other of the natural sciences. It is evident, then, the fault cannot rest with the science, but with its cultivators. It is of some consequence to our own conduct, that we acquire a clear insight of the causes that have contributed to mislead our forefathers, and a little investigation will, I think, lead us to satisfactory conclusions on the subject.

Addison somewhere says, that every man who speaks and reasons is a grammarian and a logician: with equal truth it may be asserted, that every man who lives and moves, is a physiologist and a physician. The first steps in any science are purely the result of experience, and its fundamental principles are always to be discovered in the general fund of common information. Many important facts relating both to health and disease, are spontaneously imparted, even to the most ignorant and unobserving, by the unavoidable contemplation of their own economy. But when any branch of

knowledge is elevated into a science, and made the subject of a particular pursuit, facts multiply fast, certain coincidences are found to exist amongst them, and thus general principles are formed. If philosophers would govern themselves by the strict rules of reasoning, this deduction of principles would be perfectly legitimate; but, unfortunately, the natural indolence of the human mind, and its general inaptitude for close and correct observation, have often substituted for the severe duty of induction, the more agreeable pastime of hypothesis. For example, Dr. Broussais, a celebrated French physician, observed that numerous disorders were attended with a state of vascular excitement and incipient inflammation. He pursued his observations, and interesting facts were obtained; but getting tired of this slow and sure mode of proceeding, he cut the Gordian knot of inquiry, and formed this hypothesis, "that all diseases proceed from too much or too little vascular excitement." This postulate, like the bed of Procrustes, was converted into an instrument of torture, and every disease, of every climate and complexion, was subjected to the yoke. Thus cancer of the stomach, hæmatemesis, and simple inflammation of that organ, were included under the term *gastritis*. Exactly similar has been the history of all ages of medicine. In the first rudiments of the science, men were guided entirely by observation, and an immense store of facts was accumulated. The pursuits of this branch of knowledge were made a particular profession, and we find a large class of men assuming the appellation of physicans. Certain vigorous intellects set themselves about arranging these facts into a system, and in this way many sound principles were discovered. Not content, however, with this orthodox mode of study, they became impatient with the apparent irregularity of these phenomena, and devising arbitrary hypotheses, determined to subject every stubborn fact to their dominion. The task of the medical student was now entirely changed; instead of striving to extend the bounds of his knowledge by the acquisition of new facts, his whole energy was directed to the barren task of reconciling every phenomenon that occurred to the prevailing theory. The first of these scientific tyrants who arrested the progress of medicine, were styled the dogmatists, and their empire lasted from the time of Hippocrates to the age of Ptolemy Philadelphus. At that time Herophilus made a stand against the old system, and declared for common sense and observation; but, unfortunately for the science, a mad follower of his, one Serapion, brought the new system into disrepute, by declaring against reasoning altogether, and depending upon pure empiricism. Glaucias, however, remedied, in some measure, the evil engendered by the indiscretion of Serapion, by establishing what was called the tripod of medicine, that is, laying the foundation of the whole in these three particulars,—*observation*, *history*, and *analogy*. Considerable progress was made under the influence of Glaucias; but the dogmatic system gradually recovered its predominance, and under Asclepiades, a physician of Rome, who flourished in the time of Augustus Cæsar, the medical world was reduced, under the power of hypothesis, as completely as the political world under the dominion of the sword. His doctrines are too puerile, however, to be noticed here. He was the model of court physicians, and professed to cure *tuto, celeriter, et jucundè*. His followers were called methodics, and prevailed until the time of Galen, who formed a system for himself. I need not say that this system was founded on the original dogmatism, and was, in consequence of the decline of learning in Europe, the only one known or cultivated for many ages. On the revival of learning, the inconsistencies of Galen became evident, but his successors fell into errors of equal magnitude. Some, like Paracelsus, were misled by a fanciful analogy between the principles of chemistry and the laws of life; others, like Bellini, endeavoured to explain the vital phenomena, by mechanical principles; and others again, with Stahl, attempted to account for the same phenomena by ascribing to them a particular intelligence. In the beginning of the sixteenth century, Vesalius restored the cultivation of anatomy, and has shown himself by this means the greatest benefactor to medicine of modern times. Great good has resulted, not merely from the new light which his discoveries shed on the animal economy, but from the habits of observation and careful inspection which they introduced amongst medical men, habits which weaned them gradually from their admiration of the hypothetical conceits of the ancients. It was, doubtless, much more agreeable to sit in one's closet, and amuse oneself with a romantic theory, the fruit of some brilliant imagination, than to labour sedulously in the loathsome dead-house, or to pass hours of tedious observation in the sordid abodes of sickness and misery; but the superior fruits of the last plan soon raised it in the opinion of the public, and the mere speculator fell into disrepute.

This desirable consequence was much accelerated by the publication of the works of Galileo and Bacon. Galileo's works are a pattern of cautious investigation; but Bacon, by carefully reviewing the labours of his predecessors, with a clear intelligence and an extensive comprehension, discovered

the source of all their errors, the rock on which they split, and from a careful consideration of the steps which had been taken in successful speculation, he elicited the true method of investigating truth. The ancients defined philosophy to be the "science of causes," and Cicero thus defines a cause:—"Causa ea est quæ id effecit cujus est causa. Non sic causa intelligi debet ut quod cuique antecedat, id ei causa sit; sed quod cuique *efficienter* antecedat." It is evident from this passage that Cicero imagined the proper object of philosophy to be, the knowledge of the *necessary* connexions existing amongst events. This idea continued uncontroverted to the time of Bacon, and is not entirely eradicated from the Continental schools even at this day. Bacon has beautifully shown, however, that the true objects of philosophy are not *necessary* and *efficient* causes, but constant conjunctions, and has with great force embodied his system into one sentence, the most important that was ever written or printed:—"Homo naturæ minister et interpres tantum facit et intelligit, quantum de naturæ ordine, re vel mente observaverit, nec amplius scit aut potest."—"Man, the servant and interpreter of nature, understands and influences the order of her operations, so much as observation of mind or matter may have taught him, and no more." The influence of the Baconian doctrines was felt in every branch of natural philosophy, but less in medicine than in any other. The rapid progress which has been made in every department of physical science is known to every-body. Is it not then a matter of surprise, that the science of medicine should, at this day, be disfigured with fantastic theories, such as ought to have sunk with their authors long ago into the vault of all the Capulets? These fallacious theories will frequently enter into the subjects of our future demonstrations. It will be the business of all of us to interpret nature for ourselves; to proceed carefully from one fact to another; to avoid the influence of deceptive analogies; to shun the rash application of general principles; in a sentence, to keep ourselves free from the errors of our predecessors.

I think we may justly ascribe all the falsehood of the medical theories which have hitherto misled us, to the following causes:—

1st. The erroneous association of the idea of causality with the visible symptoms of disease.

2nd. The natural indolence of the mind, leading it to rest contented with hypothesis, rather than undertake the labour of its verification by inquiry.

3rd. The same impatience of detail, leading to rash generalisation.

In our subsequent demonstrations I shall have constantly to recur to these sources of error, and I trust, before the conclusion of the course, they will be familiar to all of us. Without reference to particular instances, these general principles are of course nearly unintelligible; their illustration, therefore, by the cases which come before us, will form a part of my duty.

We have thus briefly considered the object of our research, and the means by which we are to attain it. The object of our research is a knowledge of the laws of life under disease; the means of obtaining that knowledge are observation and experiment. Life can only exist under two conditions—in the condition of health and in the condition of malady. The anatomical and physiological lectures are supposed to have made us acquainted with the first condition; and the systematic lecturer on medicine to have given us an insight of the second. Our duty now consists in studying together the particular examples which this hospital affords, and to apply them as tests to the principles we have been taught. Wheresoever these principles correspond with the result of our observation, they may be considered as corroborated, but if there be any discrepancy we are bound to suspect their validity, and afterwards to inquire into the evidence on which they are founded.

The natural history of disease presents a wide field for our inquiries, and would certainly involve us in confusion, if we did not adopt some plan of arrangement for our guidance.

All the phenomena, whether healthy or morbid, to which the human body is subject, must have relation to the order of time, or to the order of place, that is, they must have an order of succession in their appearance, or they must refer to some particular part of the body. Thus assimilation must precede circulation, and circulation must precede secretion, and determinate functions are referable to certain organs. These relations are similar in disease, and upon these two principles of classification, Morgagni's celebrated work *De Causis et Sedibus Morborum* is established. We may safely take them for our guidance, and we shall have to consider—1st, The order of succession in the various phenomena; and 2ndly, The organ which they apparently affect.

In medicine, as in the other natural sciences, the supposed relation of cause and effect resolves itself into mere antecedence and consequence. That circumstance which occurs first is the cause, and that which constantly succeeds is the effect. Thus the presence of an emetic in the stomach is the antecedent cause, the action of vomiting is the consequent effect. In consequence of

the numerous circumstances to be considered, medical men have found it useful to classify the series of effects as follows:—

1. Specific causes.
2. General causes.

Specific causes are such as produce peculiar effects upon the constitution, such as venereal virus, small-pox, &c. General causes are those which produce determinate effects, but not peculiar ones, as mechanical or chemical violence, altered temperature, and the like.

General causes being very numerous have been arranged as follows:—

Remote causes.
Predisposing causes.
Exciting causes.
Proximate causes.

Remote causes are those circumstances external to the body, which by exerting a slow and constant influence, establish those habits of function which predispose to particular diseases.

Predisposing causes are those habits of body which do not constitute disease of themselves, but render the constitution apt to receive an impression from any exciting cause.

The *exciting* cause is that circumstance, or event, external to the body, or passing in the mind, the operation of which immediately precedes the morbid excitement; for example, a draught of wind directed upon any part of the body, or a violent emotion of the mind.

To form an accurate idea of the *proximate* cause, it is necessary to recollect that the various organs have a certain consent of action, which has been called sympathy. For example, a languid contraction of the heart diminishes the energy of the brain, as is evidenced by the loss of perception in syncope, and certain mental affections acting on the brain, instantaneously affect the heart.

An augmented action of the heart, continued for some time, will produce a state of hypertrophy. This is accompanied with a derangement of many functions, and constitutes a disease. From the intimate connexion between the brain and heart, there is really no certainty whether this irregular action commenced in the one or in the other, but the effect being first perceived in the heart, the hypertrophy, or rather the morbid action producing hypertrophy, is set down as the proximate cause of the affection. It will be evident from this fact, and from further inquiry, that the proximate cause is nothing more than the morbid effect first detected in that organ, from which the symptoms appear to emanate.

1. In order to take a completeand systematic view of a disease, it is not only necessary that we should contemplate it in relation to these causes, but that we consider, in the same relation, every constituent function of the body. All the functions of the human body may, as respects the practitioner, be advantageously arranged in three classes, viz., the functions of Relation—the functions of Assimilation—the functions of Reproduction; and it will be convenient to consider the symptoms in this order:—

1. *Relation*—External appearance; locomotion; voice and speech; sensations; moral affections; intellect; sleep.

2. *Assimilation*—Digestion; respiration; circulation; heat; secretion.

3. *Reproduction*—Generative functions of men and of women.

1. Under the head *external appearance*, we are to consider the attitude, the size of the body, the firmness of the flesh, the colour of the skin, eruptions, impressions on the integuments, tumours, solutions of continuity of every kind.

2. The organs of *locomotion* consist of the bones and muscles. The bones furnish numerous symptoms, such as deformity, immobility, crepitation, caries, &c. The affections of muscles are much more numerous, viz., exaltation of power, diminution and total abolition of power, lassitude, tremor; rigidity, cramp, subsultus, convulsions, catalepsy, or loss of voluntary powers, cholera, &c.

3. In a state of health the *voice* is sonorous, continuous, and adapts itself, by its inflexions, to express the various emotions of the mind. In disease it is sometimes enhanced, sometimes weakened, and sometimes lost altogether, as in aphonia; its tone is as often altered as its force; it is at times clear, at others acute, whistling, hoarse, nasal, discordant, &c. The *pronunciation* is also often modified; it is sometimes tremulous, stuttering, slow, unnaturally quick. Loss of speech or pronunciation may exist without loss of voice, as in dumbness. A curious instance of loss of speech after poisoning occurred at this hospital about two years ago; the woman was quite dumb for a week, and suddenly recovered. The voice furnishes some useful aid to auscultation; its reverberation in a hollow vomica has been called pectoriloquy, whilst in an enlarged bronchia it is called resonance. Egophony is a strong resonance of the voice in the bronchia, imparted through thin parietes, and a stratum of fluid, as in hydrothorax.

4. The disorders of *sensation* are of course numerous. Increased or diminished sensibility, or its entire loss, as in paralysis arising from pressure on the posterior columns of the spinal marrow. The infinite varieties of pain, of which the situation, kind, and degree, are important diagnostic signs of diseases. The various affections of

the five senses are also highly deserving of attention.

5. The *moral affections* may be too much excited, as in hypochondriacs. In mania and certain fevers these affections are entirely abolished. In some cases a peculiar perversion of character takes place, and it has been observed that those who, in a state of health, are the most strictly moral, often become, under the influence of disease, delirium for example, remarkably indecent.

6. The symptoms derived from the *intellectual functions* relate chiefly to attention, memory, imagination, and judgment. Any of these powers may be deranged in disease, but most generally they are simultaneously affected. The powers of the understanding may be much increased or diminished. In melancholic subjects there is often a wonderful acuteness of intellect. In typhus fever, on the contrary, the intellectual functions are, for a time, very much impaired. A perfect ablation of mind takes place in apoplexy.

A perversion of one or more of the mental powers constitutes delirium, of which there are almost infinite varieties. Sometimes external perception is most affected; at other times the power of consciousness. On some occasions delirium is transient, and returns at intervals; on others it is constant. It has also been distinguished into tranquil and furious delirium.

7. *Sleep* furnishes us with many symptoms. We may have sleep too much prolonged; it may be curtailed as in acute diseases; or it may be suspended altogether; dreams and incubus deserve our attention as well as somnolency, or a state of stupor between sleeping and waking, and torpor, coma, lethargy, and carus, which are but grades of unnaturally-heavy sleep.

II. We now come to the second class of functions, those of ASSIMILATION; and first of *digestion*:—

1. In health the appetite is perceived at regular intervals, we eat with pleasure, thirst is moderate; digestion is carried on without any sense of weight or other unpleasant sensation. The fæcal matter is agglutinated, small in quantity, and voided without pain or difficulty: every organ connected with this function presents a healthy character. The teeth are white, smooth, and solidly fixed in the alveolæ; the gums are firm, continuous, and of a pale-red colour; the mouth moist and of a bright red; the abdomen, which contains the greater part of the digestive organs, presents its natural volume and pliantness. In disease all these acts of digestion, and the organs which contribute to them, present irregularities more or less remarkable. But as they are of daily occurrence, it would be tedious to enumerate them here, and they will form the subject of our daily conversations. They include the state of the tongue, pharynx, œsophagus, stomach, large and small intestines, and, in fact, of all the chylopoietic and assistant chylopoietic viscera.

2. The symptoms attached to the phenomena of *respiration* are numerous.

In a state of health the respiration is easy, equal, without noise; its frequency is in relation to the age and other conditions proper to the individual. The number of respirations is generally 35 per minute, the first year of life; about 25 the second year; about 20 at puberty; and about 18 at adult age. It is comparatively a little more frequent in women and people of low stature. The number of breathings is augmented by all violent exertions, by the efforts of declamation, and by profound emotions. The dilatation of the chest in infancy is chiefly effected by the ribs, and in old age by the diaphragm; at the adult period it is performed equally with the aid of both.

The respiration may be frequent or slow, sudden or gradual, full or slight. It may be difficult as in dyspnœa, suffocating as in orthopnœa; it may be high as in asthma, and so low as not to be perceptible, as is the case in syncope; it may be unequal as respects the quantity of air inhaled; irregular, in relation to the time occupied in each respiration; it may be intermittent as when the time of a respiration passes over without its occurring; and it is modified almost infinitely by disease.

In a state of health there is a scarcely-perceptible tremulousness accompanying each respiration; a snoring sound more or less strong, is occasionally emitted during sleep, and in disease, the breathing may become hissing, suspirious, sobbing, or stertorous. The odour and temperature of the breath may be altered by disease. It is also supposed with some foundation, that an alteration takes place in the chemical action of the air on the blood, under the influence of morbid habitude.

Dr. Laennec's newly-invented mode of ascertaining pectoral diseases by auscultation, affords many curious facts, which, to the practised ear, are signs of disease. If we apply that acoustic tube the stethoscope, or even the naked ear, to the chest of a healthy man, we shall hear, during inspiration and expiration, a very distinct murmur, produced by the entry and exit of the air, as respects the air-cells. This noise is not equally distinct in all parts of the chest; it is most distinct where the thoracic parietes are thinnest. It is also louder in children than in adults. Moreover, amongst the last, it may offer different degrees of intensity without the existence of any lesion in the lungs. In some people this sound is only sensible when the breathing is rapid; with

others it continues during life to be as loud as in infancy. In almost all instances, *one* of the lungs may present this condition, which has been named *puerile inspiration*, when the other from any cause has become unequal to perform its function. The almost endless modifications which disease produces in this phenomenon, will afford frequent opportunities for future comment. There are certain respiratory phenomena also worthy of consideration, such as laughter, yawning, sneezing, hiccup, cough, spitting, expectoration; this last action is easily converted, especially in children, into vomiting. The nature and appearance of the expectorated matters, afford invaluable indications.

3. The *circulation* is the nucleus of numerous symptoms. The circulation consists of the progressive movement of liquids, continually carried from all parts towards the heart, by the veins and lymphatics, and impelled from the heart to the capillary system by means of the arteries. In a state of health, this is performed without inconvenience, and in a manner harmonious to every organ called into play. In disease, this function offers many deviations, some having relation to the entire circulation, or at least to the entire sanguiferous system; the greater part, however, are perceived in certain organs only, as the heart, the arteries, or the veins. There may be acceleration or retardation of the fluids,—increased or diminished energy in the propelling forces, and their action may cease altogether, as in syncope. The various parts of the circulation, which we have named, though to a certain extent reciprocally dependent, have a peculiarity of action which is often less manifest in health than in sickness. The heart, the arteries, the capillary system, the veins, the lymphatic vessels and glands, are all subject to peculiar depravities.

The pulsations of the heart may be examined in four principal relations, viz., the extent to which they may be heard,—the force of the impulse,—the nature and intensity of the noise,—and, lastly, the rhythm according to which the different chambers act.

The physiologist distinguishes in the arterial circulation, three phenomena which succeed each other in constant order—*dilatation, contraction, and repose.* The physician admits but two—the beat and the repose, which alone belong to semeiology, as they alone are appreciable to the senses.

The name of pulse is given to the beat of an artery produced by the afflux of the blood which the heart expels at each contraction. Galen was the first who directed the attention of physicians to the wonders of the pulse. In health the pulse is regular, equal, pliant, whether with lentor or frequency, and of a moderate force. It is modified by age, temperament, sex, stature, idiosyncracy, and divers other circumstances.

The changes induced in these functions by disease, are of two kinds; the first set are appreciable in each beat,—the others are not perceived without a comparison of a certain number of beats. To the first series belong quickness and lentor, hardness and softness, fullness and smallness, weakness and strength; to the second, frequency and rarity, irregularity, inequality, confusion. These attributes, by their different degrees and several combinations, constitute all the varieties of pulse discoverable in diseases. The capillaries, veins, and lymphatics, also supply their quota of phenomena.

The faculty which the sound body possesses of maintaining an equable *heat*, whatever may be the temperature of the media in which we are placed, becomes more remarkable under the influence of malady. In the healthy subject, indeed, the warmth, in very hot media, is always raised some degrees, and depressed in opposite conditions. In the sick, on the contrary, we see, in certain cases, a violent sense of cold prevail, in spite of the hottest applications; and we observe, in the same manner, the heat become parching, notwithstanding the assiduous application of cooling agents. In other circumstances sick persons are much more sensible to heat and to cold than when in health. The principal modifications to which animal heat is subject, may be considered in relation to its augmentation, diminution, privation, and perversion.

5. The *secretions* supply us with very important means of diagnosis, such as must be familiar to most of us. Those secretions which take place in all parts of the body, and more especially upon the unattached surfaces of the different membranes, may be first considered, and afterwards those which relate to particular organs endowed with excretory ducts. Cutaneous perspiration, mucous, serous, synovial exhalations, sanguineous secretions, generation of pus, tears, saliva, bile, pancreatic juice, urine, are subjects to nail the attention of the student.

6. To *absorption* may be referred the tardy or rapid removal of a collection of pus amassed in a bubo or an apostema, of blood extravasated in the cellular tissue, of the serum accumulated in a serous membrane, ulceration. To its deficiency, anasarca, ascites, diabetes, &c.

7. *Nutrition* may be augmented, diminished, or perverted, as in increase of volume or hypertrophy, atrophy and marasmus, organic lesions arising from internal causes, tuberculation, cysts, tumours, ra-

chitis, all these and other changes proceed from derangements of the nutritive functions.

III. The third class of symptoms are those exemplified in the GENITAL FUNCTIONS.

The symptoms to which we have heretofore alluded, are almost, without exception, common to both sexes. The third class differ materially in each.

The alterations in the external functions of generation may more properly be considered under the head of *external appearance*. In this place we may consider the functions destined to the reproduction of the species.

In *man* the secretion of semen is but rarely augmented in disease. It takes place in erotic melancholy, and is one of the principal symptoms of satyriasmus. The diminution or suspension of the secretion is, on the contrary, a frequent occurrence. The ejaculation of the semen is subject to frequent derangement; it may be painful, feeble, or impracticable. Impotency, or an incapacity to priapism, may also frequently occur from various causes.

The reproductive functions of *woman* are subject to several maladies. The menstrual lochia, and lactation, merit particular study. The augmentation, diminution, and suppression of the catamenia, are familiar examples. The lochia, too, may be morbidly increased, diminished, or suppressed. The secretion of milk is never increased by disease, but it is frequently lessened and sometimes suspended. Sterility amongst women may exist like impotence amongst men, and springs from numberless and very different causes.

The venereal appetite may be increased in both sexes, as in satyriasmus and nymphomania, and diminished as in most diseases, and especially in such as affect people given to masturbation. Its entire abolition is called anaphrodisia; and it is often perverted in mania and other neuroses.

Such are the principal symptoms supplied by the generative functions. To these may be added the facts obtained by means of the speculum uteri, such as induration of the os tincæ, its inequalities, the tumours, ulcers, and fistulæ that may exist in the vagina. I must confess, however, I think the evil incurred greater than the good derived from this instrument.

After having taken a comprehensive view of the various functions, we shall by a careful collation of the symptoms be enabled without much difficulty to arrive at a satisfactory conclusion as to the nature of the disease. This is *diagnosis*, which we shall hereafter have to consider in each particular disease; and having arrived at this point, the *therapeutic* stage will be easy, and the *prognosis* in most instances unequivocal.

I have thus endeavoured, Gentlemen, to give you a faint outline, a kind of bird's-eye view, of the field which we are to survey and cultivate. The picture you must fill up for yourselves. The acquisition of knowledge is a good which every man must achieve for himself. All attempts, therefore, to impress knowledge upon the *passive* mind must be vain. Indeed, I do not pretend to assume the didactic character of instructor; all I aim at is, to induce you to join heartily with me in the cultivation of this interesting province of science. We may afford each other important assistance; and I am convinced that if we are sincere and constant in our exertions, we shall succeed in accumulating such a store of well-arranged knowledge as will make us highly useful as members of the community, and will be a source of comfort and consolation to ourselves to the latest moment of existence.

CASE OF FISTULA.

By RICHARD LANYON, *Jun. Esq. F.A.S. &c. Lostwithiel.*

I TROUBLE your readers with the following narration, under the assurance, that notwithstanding much has been written respecting fistulæ about the rectum, there still remains considerable difficulty in managing these troublesome complaints. Division of parts is not invariably succeeded by the granulatory process, and the practitioner is frequently not a little perplexed in the use of curative means after the bistoury has been freely used. Diseases of this nature, maintained and frequently caused by cachectic habits, present, even in the most skilful hands, no mean obstacles to their removal; every recorded case, therefore, must possess intrinsic value peculiarly its own.

In the month of April, 1828, a young man, who leads rather a debauched life, applied for the relief of fistula in perineo. Several months previously a small abscess had formed in the perinæum, and a thin ichorous discharge was the consequence. On introducing the probe, an opening was found leading to a superficial sinus, diverging from the gut and running parallel with the integuments, which it was proposed to treat by incision, but was met by obstinate resistance on the part of the patient. At length, however, he yielded, and a longitudinal opening of about an inch and a half exposed another sinus, running almost at right angles with the first, in the direction of the rectum, and so contracted as to ren-

der the director and bistoury inadmissible; it extended about two inches, and was separated by a thin partition from the gut. Guided by the probe, one arm of a pair of scissors was passed into the sinus, and the other carefully introduced into the rectum, and thus the lower or most depending part of the fistula was incised; but its upper part being less constricted, the operation was completed by the director and bistoury. An oiled tent was introduced every day, but the parts did not granulate, nor was there any discharge; the tent was now omitted for several hours each day, but with no better result.

℞. *Tinct. cantharidis*, ʒi.
Aquæ, ʒi. *M. fiat injectio.*

Some of this injection was used daily, and a discharge of thick pus followed, succeeded by granulation. After a while the healing process became suspended, and about an inch of the sinus remained open. The occasional use of the nitrate of silver completed the cure of the internal sinus; the external was successfully treated by means of adhesive straps. There was not the least disposition to constipation throughout the disease, and the cure occupied several weeks.

October, 1831.

CHOLERA MORBUS.

DECLARATION AGAINST THE DOCTRINE THAT THE CHOLERA IS CONTAGIOUS.

The Editor of THE LANCET is requested to give the following extract from a letter from Glasgow a place in his valuable Journal, as it comes from an individual of great professional experience.

A CONSTANT READER.

London, 15th October, 1831.

Extract of a Letter from Glasgow, dated 10th October, 1831.

"My professional duties have placed me in a situation which enabled me to trace yellow fever to its proper source, and also to observe the character of cholera morbus in tropical climates, and I have no hesitation in stating, that neither of these diseases originated in a contagious cause. The contagionists in yellow fever and cholera morbus, with their comfrerie, the president and fellows of the College of Physicians, may be justly designated the boroughmongers in medicine, as, by invention and the perversion of facts, they encourage delusions of the most injurious nature, and thus uphold a system of quarantine laws, in the fruits of which they partake, to the great injury of the nation. The navy, which possesses able medical men could be so arranged as to perform all the necessary duties of the existing quarantine establishments without any increase of its numerical force. The Dutch have no distinct establishment of quarantine, and they do not appear to be more subject to contagious diseases than those countries who are so amply provided with them. It is not only wicked but unphilosophical in the extreme, to assume contagion as a cause of disease without the strongest proof of its being so. I am quite certain that epidemical diseases, spreading themselves over extensive districts, as it were *per saltem*, are never contagious, as maladies of the contagious character, in their commencement, creep gradually from person to person, and thus diffuse themselves over the community in which they have been introduced. The rapidity with which yellow fever and cholera extend their influence is utterly at variance with the doctrine of contagion, as founded on truth, analogy, and impartial observation. The number of persons simultaneously attacked with cholera and yellow fever, the marches and counter marches (if I may so express myself) of those diseases, without any evident connecting link or medium calculated to satisfactorily convey them from the point they set out from, to their remote destinations, defy all the laws and phenomena of contagious diseases. The changed conditions of the air, and of the emanations from the earth, or a combination of both, will be found to be the causes of these epidemical diseases, and not contagion. The importation of yellow fever into the West-Indies, in the ship *Hankey*, from Bulam, as traced by the contagionists, is chimerical in the extreme; it is a worthless fable, and proves the authors of it to be utterly incapable of just reasoning or thinking. I am convinced, that if a premium were offered for the importation of cholera morbus, or yellow fever, into this kingdom by means of the dress or bedclothes in which patients had died in the most inveterate forms of these diseases, the thing would be found impossible. No mischief would arise unless the importers of the bedclothes could import the peculiar constitution of the atmosphere and of the earth under which these maladies originated. The doctrine of contagion, as influencing cholera morbus and yellow fever, ought to be thoroughly investigated: such an investigation is loudly called for by the interests of humanity as well as commerce, as the discordant opinions on this head, arising out of an unprincipled disposition to uphold the existing quarantine establishments, are in the highest degree injurious to commerce and humanity."

THE LANCET.

London, Saturday, October 29, 1831.

The outrages committed upon common sense, and upon every principle of justice, ever observable in the "regulations" which are promulgated by the various medical corporations, require, in the way of argument, no additional illustration. The reckless system of plunder is known in every sphere where medical science is cultivated. Stimulated by these unparalleled enormities, the voice of the profession has been loudly raised for Medical Reform, and the demand has been resisted by the ruling powers, at a time when they have been busily engaged in framing new shackles to obstruct the footsteps of all young medical inquirers. Avarice has taken such fast hold upon the minds of the incorporated, that nothing short of the most determined, most radical, measures for improving the profession, will deprive the plunderers of the opportunities and advantages of pilfering. Incapable of maintaining their station in society, except by keeping up a predatory warfare upon the property of the community, they are utterly insensible to every feeling of shame, and entirely regardless of the denunciations of public opinion.

The College of Surgeons demands from candidates for examination, proof of a six years' occupation in the pursuit of "surgical knowledge." The Company of Apothecaries demand indentures of a five years' apprenticeship to an apothecary, and proof of an additional two years' attendance upon lectures and hospital practice, in a "recognised" school of medicine—laws and regulations which announce to every parent in England, that his child, whatever may be his talents, shall not become a legally-qualified practitioner, unless he submit to a really horrible sacrifice of time, and to a pecuniary expenditure of not less than a thousand or twelve hundred pounds,—(monstrous barbarism!)—restrictions which, had they been enforced when John Hunter was a young man, would have had the effect of withholding from the world his great and innumerable discoveries,—a fact, one would suppose, strong enough to produce some feeling of compunction even in a heart of stone; but the monopolists of our medical corporations, the Bats, the hole-and-corner corruptionists, are as insensible to the dictates of experience, as they are to the impulses of every honourable duty towards the public.

How disgusting and humiliating is it to be compelled to reflect, that if there be now in England a boy having those peculiarities of mind which marked the youthful days of John Hunter—if there be a lad in England who possesses the talent for observation, and all those qualities of mind which would enable him to follow in the path, of that great man, or even to go beyond him in that path—the stores of science cannot be augmented by the labours of such a genius, unless the father of the youth so gifted, can bestow upon the education of his son a sum of money equivalent to one thousand pounds sterling! Thus, in short, the "regulations" of the medical colleges and companies amount to peremptory laws of exclusion from the ranks of the profession, of all persons whose fathers are unable to afford in their education a pecuniary expenditure which cannot be incurred by any but the more wealthy classes of society. In a word, they are laws of *exclusion* directed against the poor, whatever may be their natural endowments for prosecuting researches in the ever-interesting field of medical science.

But, what is the operation of the laws of these Solons? What their effects upon those individuals whose pecuniary means enable them to pay the extortionate tolls demanded at the avenues leading to the College gates?

Why, it would be impossible to afford any accurate description of the perplexities which they produce. The distracted and over-burdened mind of the student sinks beneath the load, or, in pursuing his studies, the youthful inquirer submits to the pecuniary extortion enforced at one of the "recognised schools," while he pursues his studies, possibly, under the guidance of a parent or friend, and rejects the rules of study laid down by the adopted agents of the incorporated monopolists. Further argument, after the hundreds of pages which have been written on the subject in this Journal, is not wanting to prove the enormity of the present system; but illustrative facts may still be supplied with advantage, more especially when those facts emanate from those *new* establishments which have sprung from the leaven of the old institutions. Is it not strange that there is not *one* school in the metropolis,—not one "recognised" school,—which has the virtue and the boldness to protest against such unprincipled folly, such barefaced exaction? Verily we believe, that if the Colleges and Companies were to require students to attend lectures which would occupy in the delivery both day and night, and to pay for as many "courses" as there are weeks in the year, the lecturers who pocket the fees—the men who profit by such a system, would never raise their voices against such a violation of the principles of humanity and justice.

In the King's College which has just opened in the Strand, we have another instance of the readiness with which lecturers pocket fees, which are thrust upon them by the peremptory decrees of the chartered corporations; or, rather, we should say, another instance of the willingness of lecturers to benefit themselves, by sanctioning such unworthy, injurious, and extortionate laws. The syllabus of the lectures delivered in the medical department of this establishment, has been framed conformably with the "regulations" for students promulgated by the JUNTO and the authorities of Rhubarb Hall,—that is, the pupil who applies to be examined, in order that he may possess the useless diploma of the one body, or the almost necessary license of the other, must produce *certificates* of having attended, or rather of having *paid* for, lectures on the subjects mentioned in the following table, which we shall here insert exactly as we find it in the syllabus:—

The following are the Times at which the Lectures will be delivered:—

	DAYS OF ATTENDANCE.						FORENOON.	
Botany	Mon.	Tues.	Wed.	Thur.	Frid.	Sat.	8 to 9,	in the early part of the October Term, and in the Spring.
Practice of Medicine	Mon.		Wed.		Frid.		9 to 10.	
Chemistry		Tues.		Thur.		Sat.	9 to 10.	
Anat. Demonstrations	Mon.	Tues.	Wed.	Thur.	Frid.	Sat.	10 to 11.	
Materia Medica	Mon.		Wed.		Frid.		11 to 12.	
Midwifery		Tues.		Thur.		Sat.	11 to 12.	

Interval for Hospital Attendance, or Practical Anatomy.							AFTERNOON.	
Anatomy, Physiology, and Morbid Anatomy	Mon.	Tues.		Thur.	Frid.	Sat.	3 to 4	Oct. Feb. Mar. Apr. May.
							½ past 2 to ½ past 3.	Nov. Dec. Jan.
Examination by the Anatomical Professor			Wed.				4 to 5,	every alternate Wednesday
Principles and Practice of Surgery	Mon.		Wed.		Frid.		8 to 9.	
Forensic Medicine		Tues.		Thur.			8 to 9.	

Nothing can more effectually illustrate the injurious workings of the *system* than this table, in which the student is enjoined *first*, to attend lectures during *four hours* daily, without any intermission; that is, he is to sit from eight o'clock until twelve every morning, to hear an indescribable jumble of expressions upon the subjects of

botany, the practice of medicine, chemistry, anatomical demonstrations, materia medica, and midwifery,—he is required to listen while certain men read discourses on these subjects during four hours every morning, Sundays excepted; and again, in the afternoon, he is called upon to attend lectures upon anatomy, physiology, and morbid anatomy, from three till four, and to listen again in the evening to discourses upon the principles and practice of surgery, and forensic medicine, from eight o'clock till nine. But there is an "interval" for "hospital practice and practical anatomy" from twelve to three, or rather from twelve to half-past two in the months of November, December, and January. In this "*interval*" the student must consume at least three quarters of an hour in walking to and from the nearest hospital; he must consume another portion of time at dinner, he ought to devote at least two hours to the practice of the hospital, and if he were to devote the *whole* of the "interval," that is, three hours to dissecting, he would be much better employed than in attending lectures upon botany and some other subjects which appear in the catalogue.

This table proves that it is absolutely *impossible* for students to comply with the terms of the "regulations," yet they are enforced with the most scrupulous, not to say infamous, exactness. Hence, conviction is carried home to every mind that the object of the medical corporations is to secure to themselves, their relatives and dependents, the receipt of innumerable fees, and that the careful, judicious, honourable, and economical education of the medical student, forms no part, no, not even the smallest item, of the "*system*" which they advocate.

THE CHOLERA.

In another part of this day's Lancet will be found some extracts from the notification respecting the Cholera, published by the Privy Council at the suggestion of the Board of Health. We have not reprinted the document in full, for the original is characterised by a pompousness and verbosity of style which would have excited the envy of Mrs. Radcliffe. It contains also a caution against smuggling, which we have left out, but every-thing else of importance is preserved. In soliciting the attention of our readers to this remarkable document in the sanatory history of Great Britain, we must entreat them for a moment to dismiss from their minds the question regarding the mode in which the disease is propagated. Whatever be the nature of this fact, there are certain duties which the trustees of the public health should invariably discharge, in anticipation of the outbreaking of a disease so rapidly fatal in its progress as that which now excites the public apprehension.

It is perfectly obvious that a wise provision against the occurrence of such a calamity should provide against all the objects by which epidemic diseases of every description are notoriously engendered and sustained. Before the irruption of the disorder, all the external agents capable of influencing public health should be put into the least offensive state; ventilation, draining, the abatement of nuisances, the shunning of encumbered populations, the examination of the food and drink of the community, should all receive the most assiduous attention. Thus far, we presume, no controversy can exist even between those who hold the most opposite sentiments on other branches of this subject.

Again, it is equally beyond dispute that measures should be prepared for the effectual administration of relief to those who may be attacked by the disease. In short, an efficient and well-organised system of medical police should be prepared for instant adoption.

The last general rule we may lay down as a law never to be swerved from, and

one equally removed from differences of opinion, is, that the seclusion of the sick should be insisted on, and every means devised for mitigating the annoyances of those whose liberties are sacrificed to the public weal. To put a case in point, suppose it be necessary to exclude a labouring man whose family depends on his free egress for their subsistence. It is obvious that the community has no right to deprive that individual of his liberty, without making full and adequate provision to prevent the privations that his family may sustain.

Having premised these general data we are the better prepared to estimate the degre of utility of the manifesto just published by the Board of Health. What then are its anticipatory measures? Magistrates, clergymen, and persons of authority, are invited to pay some attention to the state of ventilation, "the formation of district committees is suggested, of two or three persons, *one to be a member of the medical profession*, to watch over the state of health of the district; and houses are advised to be kept in view for the reception of patients." Such i the essence of all the anticipatory measures, for the advising of which Sir Henry Halford and his colleagues receive each some hundreds per annum. We might smile at their imbecility, did we not know the mischievous neglect of all efficient sanatory measures which the official nature of these *suggestions* will tend to occasion. Feeling this conviction, however, we cannot conceal our indignation at the crude, imperfect, and reckless manner, in which the notification is put forward.

Again, if we turn to some other points in this document, what melancholy examples of thoughtlessness do we find! Among the articles recommended to be destroyed after a case has occurred are "*papers*!" clothes are to be boiled in a strong ley! nurses, and we presume physicians, are to be placed in quarantine! &c. The absurdity of these recommendations, not to speak of their impracticability, is sufficiently obvious; but the last and most fearful blunder remains to be stated.

In the event of the disease assuming the terrific shape it has worn in some parts of the continent, STRONG BODIES OF TROOPS are to be drawn round the infected district, and all intercourse *with the* surrounding *country* cut off!

Now, let every man, no matter what his opinions on the transmissibility of the disease, just mark this proposition with due attention. If the disease be contagious, the healthy inhabitants of the devoted district are cooped up in actual contact with the malady! If it be local, aerial, or terrestrial, they are chained down within the very arena of the exciting cause! We may inform the *Board*, for they evidently know not the facts, of the adoption and result of a similar horrible experiment enforced in the town of Omoplaw in Poland. The majority of the inhabitants were annihilated, and the survivors only escaped by the restriction being removed. When the senseless officials resolved upon seclusion, they ought to have known the difference between cutting off intercourse between towns, and the dispersion of a too crowded population over an uninhabited district. Such is the plan which should be pursued, wherever the disease rages with unusual fury. The condensed population should be dispersed, and distributed under surveillance in the adjacent country.

The Board of Health, then, having proved itself to be only an incubus on the measures which, but for their existence, would be adopted by the community themselves, we call on the parishes to take the matter into their own hands. Let Committees be formed, comprising all the intelligent and official inhabitants, with a medical section composed of all the legally-qualified practitioners in the district, and let minute preparations be forthwith made for the re-

ception of an enemy which we may find it impossible to keep at a distance.

NON-MEDICAL CORONERS are certainly the oddest mortals in existence, and are always amusing, if never instructive. Their peculiarities are without number. We thought long ago that we had run through the whole list of their drolleries, but now find that we are very agreeably mistaken. The medical public will be somewhat amused in perusing the following communication:—

"*To the Editor of* THE LANCET.

"SIR,—An inquest was held at this place a short time since, and the verdict, totally against the real evidence, and exhibiting most marked ignorance of the laws of the animal economy, evidenced most strongly that which you have so strenuously advocated—the impropriety of an attorney acting as coroner, instead of a practitioner in medicine. The deceased, in a fit of feverish delirium, went to the sea, and on being afterwards seen *floating*, was taken up, nearly lifeless. Measures for resuscitation succeeded. He conversed, drank tea, had alvine and urinary evacuations, remarked on his state, and then three hours and a half from his being taken from the water, died. You will ask, "From what?" So ask I.

"I had the satisfaction of leaving him in the care of his usual attendant, recovered from the submersion, and merely wanting the ordinary means of arresting the very great reaction that would ensue; but stimulus was continued, though he was in a marked perspiration, and the abstraction of blood was not had recourse to.

"I was surprised to hear of his death, and more surprised to hear that the jury returned a verdict, founded on the medical evidence, that "*he died from suffocation, from water having got into the trachea or wind-pipe, from having laid so long in such a position.*" Now this suffocation from water in the trachea, took place after conversation, drinking, &c., three hours and a half after having been taken out of the sea. What kind of a trachea could he have, for salt water to remain so long in it, and not produce irritation?

"I shall be glad to know what steps I can take to disturb such a verdict, which I objected to at the time.

"I am, Sir, your obedient servant,

W. HULKE, jun., Surg.

Deal, Oct. 25th, 1831.

We are unable to afford our correspondent any assistance in such a case, as the *sea* would care very little about an indictment for *manslaughter*. If there be ground for charging any person with having been instrumental in causing the death of the party in question, then we may show Mr. HULKE how he may reach the ends of justice without disturbing the verdict. We cannot, however, dismiss the subject on this occasion, without requesting Mr. HULKE to furnish us with a detailed account of the proceedings of the Inquest; and more especially anxious are we for that part of the evidence which induced the jury to return such an extraordinary verdict.

EXTRACTS FROM THE

PUBLIC NOTIFICATION RESPECTING THE CHOLERA MORBUS,

ISSUED BY THE PRIVY COUNCIL AT THE INSTANCE OF THE

BOARD OF HEALTH.

Whitehall, Oct. 20, 1831.

IT is recommended that in every town and village, commencing with those on the coast, there should be established a Local Board of Health, to consist of the chief and other magistrates, the clergyman of the parish, two or more physicians or medical practitioners, and three or more of the principal inhabitants; and one of the medical members should be appointed to correspond with the Board of Health in London.

Every large town should be divided into districts, having a district committee of two or three members, one of whom should be of the medical profession, to watch over its health, and to give the earliest information to the Board of Health in the town, whose instructions they will carry into effect.

It is of the utmost importance that the very first cases of cholera which may appear should be made known as early as possible. Success in the treatment of the cholera mainly depends on medical assistance having been given in the earliest stage of the disease.

To separate the sick from the healthy, one or more houses should be kept in each town or its neighbourhood, to which every case of the disease, as soon as detected, might be removed, provided the family of

the affected person consent to such removal, and in case of refusal a conspicuous mark ('Sick') should be placed in front of the house, to warn persons that it is in quarantine; and even when persons with the disease shall have been removed, and the house shall have been purified, the word 'Caution' should be substituted, as denoting suspicion of the disease, and the inhabitants of such house should not be at liberty to move out or communicate with others persons until, by the authority of the Local Board, the mark shall have been removed.

In some towns it may be found possible to appropriate a public hospital or barrack to this purpose.

The houses from which the sick have been removed, as well as the houses in which the sick have chosen to remain, should be thoroughly purified in the following manner:—

Decayed articles, such as rags, cordage, papers, old clothes, hangings, should be burnt; filth of every description removed; clothing and furniture should be submitted to copious effusions of water, and boiled in a strong ley; drains and privies thoroughly cleansed by streams of water and chloride of lime; ablution of wood work should be performed by a strong ley of soap and water; the walls of the house, from the cellar to the garret, should be hot limewashed; all loose and decayed pieces of plastering should be removed.

Free and continued admission of fresh air to all parts of the house and furniture should be enjoined for at least a week. Extreme cleanliness and free ventilation are points of the very greatest importance.

Those who may fall victims should be buried in a detached ground in the vicinity of the house that may have been selected for the reception of cholera patients. On the same principle, all persons who may be employed in the removal of the sick from their own houses, as well as all those who may attend upon cholera patients in the capacity of nurses, should live apart from the rest of the community. But few persons should be employed in these duties.

Avoid all unnecessary communication with the public out of doors; all articles of food, or other necessaries required by the family, should be placed in the front of the house, and received by one of the inhabitants after the person delivering them shall have retired.

Convalescents from the disease, and those who have had any communication with them, should be kept under observation for a period of not less than twenty days.

The occupiers of each house where the disease may occur, or be supposed to have occurred, are enjoined to report the fact immediately to the Local Board of Health.

In every town the name and residence of each of the members of the District Committee should be fixed on the doors of the church, or other conspicuous place.

All intercourse with any infected town, and the neighbouring country, must be prevented by the best means within the power of the magistrates, who will have to make regulations for the supply of provisions; but such regulations are intended only for extreme cases.

Other measures may be rendered expedient, if disease should ever show itself in this country in a terrific way. It may become necessary to draw troops, or a strong body of police, around infected places, to exclude all intercourse with the country.

The poor, ill-fated, unhealthy, part of the population, and especially those who have been addicted to drinking and irregularities, have ever been the greatest sufferers from this disease, and the infection has been most virulent, rapid, and extensive, where the streets are narrow and crowded, and unclean and ill-ventilated. Magistrates, resident clergymen, and persons of influence or authority, should mitigate these evils. * * * *

It is evident that the most urgent and peculiar symptom of this disease is the sudden depression of the vital powers, as proved by the diminished action of the heart, the coldness of the surface and extremities, and the stagnant state of the whole circulation. It is important to advert to this fact, as pointing out the instant measures which may safely and beneficially be employed where medical aid cannot immediately be procured. All means tending to restore the circulation and maintain the warmth of the body should be had recourse to without delay. The patients should always immediately be put to bed, wrapt up in hot blankets, and warmth should be sustained by other external applications, such as repeated frictions with flannels and camphorated spirits; poultices of mustard and linseed (equal parts) to the stomach, particularly where pain and vomiting exist; similar poultices to the feet and legs, to restore their warmth. The returning heat of the body may be promoted by bags containing hot salt or bran applied to different parts of it. For the same purpose of restoring and sustaining circulation, white wine whey, with spice, hot brandy and water, or sal volatile, in the dose of a teaspoonful in hot water, frequently repeated, or from five to twenty drops of some of the essential oils, as peppermint, cloves, or cajeput, in a wine-glass of water, may be administered; with the same view, where the stomach will bear it,

warm broth with spice may be employed. In very severe cases, or where medical aid is difficult to be obtained, from twenty to forty drops of laudanum may be given in any of the warm drinks previously recommended.

These simple means are proposed as resources in the incipient stage of the disease where medical aid has not yet been obtained.

In reference to the further means to be adopted in the treatment of this disease, it is necessary to state that no specific remedy has yet been ascertained; nor has any plan of cure been sufficiently commended by success to warrant its express recommendation from authority, but the greatest confidence may be reposed in the intelligence and zeal which the medical practitioners of this country will employ in establishing an appropriate method of cure.

Signed by HENRY HALFORD,
the President of the Board.

CASE OF

INDIAN CHOLERA,

WITH REMARKS.

By WILLIAM BIRTWHISTLE, *Esq., M.R.C.S., London.*

THE extensive ravages lately committed by cholera morbus on the Continent of Europe, and its present prevalence so near to this country, have naturally directed the attention of the profession, and the public in general, to its progress. Every circumstance, therefore, tending to illustrate this fatal malady, cannot but be highly interesting to your readers.

It has been doubted by many whether the disease now raging in Europe be really the same with that which has been so long the scourge of India. The following well-marked cases of Indian cholera occurred during my late residence at Calcutta, on board one of the Hon. Company's ships. The disease was then raging on shore, and in several of the neighbouring ships, with destructive violence.

CASE I.

Gunner William Turner, ætat. 70, complained to me on the morning of the 3rd of December last, of feeling himself somewhat unwell. He stated that he had passed a restless night, having been frequently disturbed with painful twitchings in his fingers and toes, accompanied with some degree of nausea and oppression of the præcordia. There was also an appearance of languor and lassitude about him, with a blanched, heavy, and anxious countenance, a slow, weak, and labouring pulse, oppressed breathing, and the skin occasionally breaking out into cold clammy sweats.

These precursory signs of cholera were quickly followed by the most alarming symptoms of the disease. The spasms now attacked the extremities and abdominal muscles, gradually increasing in strength and duration, and producing indescribable agony. The vomitings and purgings were frequent, indeed almost incessant, and most distressing, the discharges being first of a mixed character, afterwards watery, and then assuming a bilious aspect. The pulse was now small, quick, and contracted, varying however somewhat in frequency and power, according to the absence or presence of the spasms. During the intervals of the spasms, the appearance of the patient was prostrate, and scarcely exhibiting any signs of life—indeed many of the by-standers thought the man dead. I immediately had him placed in a bath at a very high temperature, gave him large doses of laudanum, and strong brandy made warm, which were at first rejected, but after persevering some time, retained, and had six men to rub him with mustard, hot flannels, and stimulating embrocations over the whole body. By these means some degree of reaction took place, when I opened a vein in the arm, and abstracted fourteen ounces of blood. This at first flowed with difficulty, indeed only in drops, but in a short time it came away in a full, continuous, stream, affording the most decided relief to the symptoms. The stomach having now become tolerably tranquil, I administered a scruple of calomel, combined with two grains of opium, with a view of still further allaying the irritation of the mucous lining, and stimulating the gorged liver to relieve itself by a flow of secretion.

He continued easy until the next day, when the symptoms returned with increased violence. By the use, however, of the same means, and a further abstraction of blood to twelve ounces, complete and permanent relief was obtained. He gradually regained his strength, requiring only small doses of ol. ricini, and on the tenth day after the attack was convalescent.

Two days after the preceding case, I was called to attend a seaman on board the "Susan," in the absence of Mr. Lawson the surgeon. He was twenty-eight years of age, and of a remarkably stout and healthy appearance. The symptoms were similar to those related above, the same remedies were employed (bleeding being of course carried to a much greater extent), and I am happy to say with the same fortunate result.

Remarks.—The hot water bath is a most important remedy in this disease; it excites the arterial system, equalises the cir-

culation, and produces a flow of perspiration. But in consequence of the difficulty which is generally experienced in obtaining it on board ship, especially in small vessels, and the unavoidable fatigue and exposure in removing the patient from and to his bed, it is but seldom had recourse to. I believe, however, that the hot air-bath would be equally, if not more, efficacious, and I think that its immediate application in the congestive stage would be highly beneficial. The patient could be placed between blankets in his bed, and this powerful stimulant applied without any inconvenience, and what is of more consequence, without loss of time. The late Dr. Armstrong gave it the preference in most cases to the hot water-bath, and there were few more accurate observers.

I think there can be no question about the non-contagious nature of this disease, and yet it is difficult to explain its origin and progress by atmospheric influence. The vessels at Calcutta lay in a line two abreast, one side of which is frequently severely attacked with cholera, whilst the other is totally or comparatively free from it. Now, if the atmosphere were contaminated with any infectious matter, this could not, one would imagine, be the case. These vessels lay within a few yards of each other, constant communication taking place between them (no precaution being taken to prevent it), and were it contagious it must have become universally prevalent. The quarantine laws cannot, therefore, offer any safeguard to this disease. The regulations issued by the Board of Health, in the event of the disease reaching this country, may tend to calm the public mind, but I have no hesitation in saying that experience would prove them utterly useless in arresting its progress.

Mile End Road, Oct. 24, 1831.

EFFECT OF

EXCITEMENT OF THE CEREBELLUM

UPON THE GENITAL ORGANS.

To the Editor of THE LANCET.

SIR,—If menstruation ever occur during hanging, I am inclined to think that, in the present state of our knowledge upon the subject, we ought to conclude that it is produced by the violent muscular action into which the uterus, with the other contractile organs, is thrown during the fatal struggle. Yet there are some reasons for entertaining a different opinion. Facts, which are numerous, prove, that if, by any cause, the cerebellum is disturbed in its action, the genital organs also may be excited. But although the venereal sensation will immediately determine menstruation when there is a tendency to it, there is, I presume, no proof adduced that menstruation is the effect of hanging.

With all due deference, I am surprised at your last correspondent's doubts, whether hanging can *so affect the cerebellum as to excite the amative organs;* and I maintain that apoplexy and *mishaps in the neighbourhood of the cerebellum* have not this effect. Many infatuated wretches have made use of suspension to produce those pleasures which they have been unable to obtain by natural means; and thus have obtained a prolonged sexual orgasm. M. de Sèze gives instances of this. Blisters and stimulants to the occiput have often produced genital excitement. The engorgement of the cerebellum, occasioned by the inhalation of irrespirable gases, may have a similar effect, as Fontana found pleasure in the lethargy caused by carbonic acid gas. It is curious that sensual pleasures may be derived not only from the degree of pain which Rousseau endured and employed, but also from the most dreadful of deaths, apoplexy and suffocation.

I will conclude these hasty remarks with a few extracts which I have translated from Serres' Anatomy of the Brain, and if your correspondent will consult that work, I think he will not doubt the powers of the cerebellum over the genital organs.

Ségalas found, and M. Serres repeated, the experiments, that "if a stiletto is plunged into the cerebellum of a guinea-pig, in the direction of the superior part of the medulla spinalis, erection of the penis is caused; and if the instrument is continued into the spinal marrow, seminal ejaculation takes place.

"Dr. Romel observed, at the hospital St. Antoine, an apoplectic female, seventy years of age. He remarked, that menstruation, which had ceased many years before, reappeared during the course of the disease. From this circumstance he concluded, that the apoplexy might be cerebellal; this was found to be the fact, and the uterus was filled with coagulated blood, and its tissue, as well as that of the fallopian tubes and ovaries, was phlogosed.

"A girl, abandoned to a premature indulgence in venereal pleasures, prostrated herself to satisfy her desires, *et se livré à toutes les manœuvres de la masturbation.* She fell into a state of nymphomania. She died, and an induration of the middle lobe of the cerebellum was found, with other appearances indicative of chronic inflammation of the part."

Z.

ST. THOMAS'S HOSPITAL.

CLINICAL LECTURE

BY

JOHN ELLIOTSON, M.D., F.R.S.,

PROFESSOR OF THE PRINCIPLES AND PRACTICE OF MEDICINE

IN THE UNIVERSITY OF LONDON,

Delivered October 17th, 1831.

CASE OF HYDROPHOBIA.—TRIAL OF THE SUB-CARBONATE OF IRON.

GENTLEMEN,—I shall this morning direct your attention to the case of hydrophobia, which was admitted upon the 30th of September, and proved fatal on the following morning. The patient was named Benjamin Smith; he was fifteen years of age, and had been bitten in the right *little-finger* eight weeks previously by a cat, supposed at the time to be mad, and which cat had been bitten eight or nine weeks previously by a mad dog. Two or three other people were bitten on the same day by the cat, which on the day following was destroyed. The dog was killed the same day that he bit the cat. It appeared that nothing was done for the boy until twenty-four hours had elapsed, when he sought for medical aid, and caustic was applied to the bitten part. Two or three days after the application of the caustic, Mr. Key saw him, and cut out the part. Nothing occurred subsequently till the 28th of September, when the boy experienced a pain in the right *upper arm*, which extended in the course of the nerves to the axilla, and then ascended to the neck, and reached the right side of the head. At the same time his appetite declined, and he felt poorly. On the 29th he felt equally languid as he did on the 28th. When he went to bed, some cold tea was placed within his reach at the bed-side, in case he should be thirsty, and a dose of purgative medicine was given in the evening. In the course of the night, on taking the tea to drink, he found a difficulty in swallowing; and when first seen on the morning of the 30th, before he got up, he started and screamed. This starting and terror, and inability to drink, afterwards increased to such a degree, that he was brought to the hospital; and when I saw him, which was at about one o'clock in the day time—the moment he arrived,—he was sitting in the lap of the woman who had brought him, clinging round her neck, and looking about with an expression of extreme terror and distress. I had no doubt, from the mere appearance of his countenance, that he was labouring under hydrophobia, as was alleged. He was undressed and put to bed, when I found his pulse very irregular, so that during one portion of a minute it was beating at a rate of between 70 and 80, and then would gallop on at the rate of above 100. His breathing was quick, irregular, and interrupted by frequent sighs. I blew in his face, when he instantly fetched a sudden and deep-sobbing inspiration, started violently, and was thrown into a fit of indescribable anguish.

There could be no doubt about the nature of his disease, but still it had not reached the greatest intensity, for when a looking-glass was placed before him, so as to throw a full light upon his face, he bore the reflection without agony, and I could sprinkle cold water upon him without causing him to start. Indeed, to oblige me, he thrust his hand into a basin of cold water, and he swallowed an electuary; but on being asked by me to *drink* a glass of cold *water*, and really wishing to oblige me, he found the attempt altogether vain. When he had carried the glass close to his mouth, he pushed it away, and declared that he could not swallow the water.

I was quite satisfied that the *guaco juice* had failed, even when fully administered; but since some persons still persist in saying that it is a remedy for the disease, I resolved to exhibit it, if possible, especially as Sir Rob. Kerr Porter has supplied the hospital with abundance of it. I wished also to give one fair trial to the *carbonate of iron*, and therefore proposed administering an electuary composed of carbonate of iron and treacle, diffused in the guaco juice, both in the way of glyster and by the mouth. This mixture was very easily thrown into the intestines by means of Weiss's syringe, but though administered repeatedly, it was invariably discharged as soon as it had entered. The attempt by the mouth was equally unsuccessful, although he promised to swallow whatever we gave him. On tasting the guaco juice, he dashed the cup from me, saying it stunk, and declared he would not touch it; nor could he be prevailed upon to do so. The simple electuary of carbonate of iron and treacle he not only did not refuse to take, but continually asked for, so that between two o'clock on the Friday, and eight the following morning, when he died, *nine ounces* of carbonate of iron itself were swallowed.

As I felt it my duty to give him every chance, I sent also for a medicine respecting which some gentleman had written a notice in a book at Guy's Hospital, very kindly sent over to us by Mr. Stocker. The notice said that this gentleman possessed a certain cure for the disease, and would furnish the remedy if any one would apply

to a certain address, when a case of the disease occurred. A messenger was accordingly sent to the place named, but no such person could be found there, so that the treatment became limited to the exhibition of the carbonate of iron. The boy was exceedingly amiable and respectful; he made continual apologies for any little rudenesses he committed, was thankful for every-thing that was done for him, and made every effort to submit to all our wishes. He was continually shaking hands with all around him, and particularly with one gentleman whom he had seen before his illness. The sudden and deep inspirations, however, the choking, and the fits of general agony, became more and more frequent during the night, and towards eight o'clock on the Saturday morning, the 1st of October, he all at once sank, and presently expired.

Post-mortem Examination.—The body was inspected in the course of the day. The brain, spinal marrow, throat, and thoracic and abdominal viscera, were minutely examined, but nothing was found except a little more fluid than usual around the brain and the spinal marrow, but still not more than is very frequently seen on opening bodies: a little congestion about the glottis: and the lungs loaded with blood, as is continually seen when the breathing has been at all difficult, and there was one red patch on the inner surface of the stomach, but much inferior in extent to what we see every day in a variety of cases. Very little of the electuary was in his stomach, notwithstanding the quantity he had taken. It had freely passed into the intestines. I should have mentioned that he has suffered extreme flatulence, passing torrents of wind from the intestines and œsophagus, for which he made repeated apologies.

Remarks.—This was a well-characterised case of hydrophobia, the chief symptom of which in the human subject is not any difficulty of swallowing, but extreme sensibility of the surface to sudden impressions, and the sudden catching and deep inspirations produced by such impressions, just as we feel on stepping suddenly into cold water, when, in spite of ourselves, the diaphragm descends, the ribs rise, and a sudden catching is produced. Now this takes place in hydrophobia from a mere breath of cold air being directed upon the surface of the body. Even the agitation of the bed-clothes, or the curtains, or the circumstance of a fly settling upon the skin, will often have the same effect. There is also always great anxiety, great fear of strangers, great suspicion, just such as we observed in the present case. The breathing too is generally quick, and fits of this involuntary catching of the breath—this involuntary deep-sobbing inspiration, take place, even when no external exciting cause is in operation, and with this there are always fits of violent agitation, and more or less general convulsion. There is usually, however, a dread of swallowing liquids, and more or less difficulty—frequently an utter impossibility when the attempt is made, and this difficulty sometimes extends to both solids and liquids. But this inability to swallow is not general, and it often occurs at one period of the disease, whereas at another the patient can swallow perfectly well. In the case which we had here last year, the boy ate heartily of bread and cheese not long before he died, and you observe that the present patient, although in my presence he could not be prevailed upon to attempt swallowing a glass of water, regularly took a large quantity of electuary. Dogs will often lap water in this disease, and even swim across a stream, just as this boy, to please me, plunged his hand without any agitation into a basin of cold water.

I forgot to mention that he complained of a violent pain in the throat, for when the diaphragm descends and the sudden inspiration occurs, a spasm appears to seize the glottis, so that it becomes closed, and no further air is allowed to enter. These attacks of spasm necessarily occasion severe pain in the throat. The pulse is usually rapid in this disease and feeble. In this case it was both weak and rapid, and as I mentioned, irregular. It is common too, in the disease, for patients, towards the last, to sink rapidly. The patient who died here the year before last, had just been so violent as to get out of bed and drive every one from the room, when he quite unexpectedly expired, very soon after being got to bed. I may mention that he was very ferocious, endeavouring to bite and injure all about him, giving way to the most violent fits of passion, while the present boy, notwithstanding his anguish and agitation, was harmless, kind, and respectful. This appears to agree with the natural character of each, for the one had been always a mischievous and wicked boy, while the present was altogether of an amiable character.

The duration of the disease usually ranges from rather less than twenty-four hours to six or seven days; here it lasted perhaps three days. The average period of death is on the second or third, or at the utmost the fourth, day from the first occurrence of the difficulty of swallowing, and the sudden attack of dyspnœa. It was at the end of about thirty hours from the first occurrence of these symptoms that the boy died; but then, for at least twenty-four hours before that, he had been indisposed, feeling

weakness and general indisposition, which are the usual precursors of the decided hydrophobic symptoms. The duration of the disease does not appear to be connected with age, for a child under four years of age, and a man of 73, both died upon the sixth or seventh day, and these cases, I may remark, show that the disease may attack all ages, at least ages of from four to between seventy and eighty years. The earliest case, however, that I know of, occurred in a child three years and a half old, but whether infants are less susceptible of the disease I do not know; for the want of cases at an earlier age than this, may be ascribed to the absence of exposure to the bite of rabid animals, for it is not till a child runs about, that it is likely to be in the way of a mad dog.

You will observe that this boy, labouring under regular hydrophobia, was bitten by a cat, not by a dog. However, it has been said, that when a cat communicates the disease there is no dread of liquids or inability to swallow even liquids or solids, but rather a general trembling and agitation, debility, rapidity of pulse, and great restlessness, in the midst of which symptoms the patient sinks. I certainly did see a man who had been bitten by a cat supposed to be mad, in whom these were the symptoms instead of the more common form of hydrophobia. He was brought into this hospital about five years ago, but not only did the present patient experience all the symptoms of hydrophobia, but you will see a case described in the *Medico-Chirurgical Transactions* for 1828 in which the symptoms were also of the ordinary violent kind, and yet, as in the present case, the wound had been inflicted by a cat.

I need scarcely tell you that this is a real disease. Some have denied it, and ascribed the symptoms to fancy and fear; but the course of the disease is far, very far, too regular, too universal, to leave any doubt that it is a real disease, and many persons die of it without knowing its true nature. Children who had probably never heard of it have been seized with hydrophobia after the bite of a rabid animal, at the usual time, and those who labour under it have frequently forgotten that they had been bitten. The present boy knew he had been bitten, and spoke of it with the greatest composure, but seemed too much absorbed in his sufferings to think much about it. In spurious cases the symptoms generally begin far too early; in the real disease they rarely begin before the expiration of a month, and I believe the average interval between the bite and the disease is from one to two months. In the present case the interval was two months. It is said sometimes to have run to six or nine months, and some would have us believe, that the interval may run on to years. A case of nineteen months' interval is recorded in the *Philosophical Transactions*, and one happened about a year ago in a child in which the disease came on almost immediately. Still the usual average interval is from one to two months. In spurious cases there is an extreme dread of swallowing, and a declaration that it is impossible, while in the real case swallowing is often possible, and great attempts are made by the patient to overcome his difficulty. In the spurious case there is not the characteristic of a deep, sudden, sobbing inspiration, and extreme susceptibility of the surface, but general restlessness and disquiet, only with the conviction of the impossibility of swallowing water, and the bite is constantly talked of. Some cases of mere violent inflammation of the pharynx have been mistaken for hydrophobia, but a mere inability to swallow could impose upon no one who had ever seen the real disease.

I mentioned that several persons were bitten by the same cat, and that none hitherto had been known to suffer, though some took no precautions. In general very few who are bitten suffer. Dr. Vaughan mentions between twenty and thirty persons who were once bitten; some did nothing; eight others only took the Ormskirk medicine and a dip in the sea. Yet of this number only one was seized with hydrophobia. John Hunter mentions twenty-one persons bitten by a dog not one of whom took any measures to prevent the disease, and yet but one among these also was attacked by hydrophobia. Much depends upon the part which is bitten, for if it is an exposed part, such as the face and hands, the disease is most likely to appear. In every case that I have seen, though I have now seen many, an exposed part, either the hand or face, has always been bitten. If the parts are covered with clothes, the saliva is wiped off the tooth by them before it reaches the flesh, and thus mischief is frequently prevented. When I consider how few suffer the disease among those who are bitten, I confess I have very great doubt as to the efficacy of any measure used in the way of prevention. With respect to caustic, so many cases have occurred after its application, that no one places any reliance upon it. I have equal doubts respecting the use of incision. Mr. Calloway related to me the other day a case in which, almost at the same moment that the bite was received, the person had the part cut out by a surgeon, and a copious discharge afterwards kept up for a length of time; and yet that individual, at the end of the ordinary interval, was seized with hydrophobia. I do not mean to discourage exci-

sion. Were I bitten by a mad dog I would have the part cut out, and if that were not possible I would have the member amputated, because such a measure affords the only reasonable hope. Yet when I consider that excision is proved to be of no use unless had recourse to immediately, and that when had recourse to immediately, as in the case just mentioned, it has absolutely been known to fail; and when I consider that whether any-thing or nothing is done, nineteen cases out of twenty are almost sure to escape, I do not put much trust even in excision, though I must repeat that I would from theory have recourse to it in every case. To *prove* the use of excision, we should compare the result in a *series* of cases where nothing was done, with the result in a *series* in which excision was performed early. It is from the want of minute, accurate, and extensive, comparative *series* of cases treated in different ways, that physic is overburdened with false views respecting the powers of so many remedies.

The pain which was felt in this case, just before the disease appeared, has been frequently observed following, you will recollect, a course, not of the blood-vessels, but of the nerves of the extremity.

The appearances on dissection threw no light upon the disease. The little effusion around the brain and spinal marrow, is a thing we witness every day on any excitement of those parts. The congestion of the lungs was such as is seen in most cases of dyspnœa from any cause. The small patch upon the stomach and the congestion about the glottis, are also common occurrences in cases where there is no hydrophobia, and, had they all been ten times greater, would not have explained the peculiar nature of the disease.

The brain, medulla oblongata, and nerves, were absolutely of the most healthy appearance. It is absurd to expect morbid anatomy to explain every disease, or even the greater part of diseases. I cultivate morbid anatomy assiduously, but he will be as poor a pathologist who looks principally to morbid anatomy, as a physiologist who looks chiefly to healthy anatomy.

After I had given the clinical lecture upon the former case of hydrophobia, I was very much censured in a publication * for saying that we found but slight morbid appearances in the head, and that that was no more than was to be expected. I was told that there were great morbid appearances, sufficient to throw light upon this affection, and that physicians had got into a bad habit of expecting no morbid appearances. A morbid anatomy of the brain was also detailed as characteristic of the disease, but just such as others had, with no better foundation, laid down to us before. Neither was the suggestion of a quarantine for dogs new. All I can say is, that in the present case the dissection was conducted before my eyes by Mr. Nordblad in the most careful, minute, and, I may add, beautiful manner, and yet every spot of the cerebrum, cerebellum, and medulla oblongata, was seen perfectly healthy. Some have asserted that the medulla oblongata is always softened. Here there was no such thing. In some cases inflammation has, indeed, been seen at the base of the brain, and especially about the eighth pair. Here was no inflammation, and the eighth pair through the whole of its course was of the most healthy aspect. Majendie also declares that he has seen no morbid appearance in the dissection of hydrophobic dogs, and many have met with the same results.

I was also censured in the same publication, for having said that the disease sometimes occurred spontaneously in dogs. I conceived that no one could doubt this; but it is *assumed*, without the shadow of proof, that the disease never arises in the dog but by contagion. After this was thus broadly asserted, the doctrine was re-echoed by another * in a paper read at the College of Physicians. Now it is the business of those who make this assertion to prove it. It is not the business of those who decline assenting to it to disprove it. We see a dog labouring under hydrophobia, and we do not know that it has been bitten. What right, therefore, has any one to declare that it has been bitten? The disease may just as well have sprung up spontaneously as have been caused by contagion, and we have a right to decline believing that it has been bitten until the fact has been proved. Some contagious diseases unquestionably spring up under peculiar circumstances without contagion, and I refer you to my paper on Glanders for an illustration of this in a disease of brutes. Why should not hydrophobia be a disease of this kind? I shall believe it is till all mad dogs are proved to have been bitten, because I have no right to *assume* that a dog has been bitten. To declare that every mad dog has been bitten, appears to me a most unwarranted assumption. The *onus probandi* clearly lies with the asserters. More than this, I have known dogs seized with hydrophobia that hardly could have been in the way of other dogs. Ladies' lap-dogs, petted at home and only taken out for an airing in a carriage, or with a string, carefully kept from the society of all other dogs, lest they should do amiss and get into naughty company, that were kept out of all canine society for

* The Veterinarian?—*Rep.*

* Mr. Cæsar Hawkins?—*Rep.*

the sake of their morals (*much laughter*), or which have been for other reasons confined in yards behind a house, or in areas, and which yet have gone mad. Dr. Mosely also mentions, that many dogs were seized with hydrophobia when epidemic in the West Indies, which had no communication with each other. Some dogs that were brought from North America, and others from Europe, during the time that hydrophobia was epidemic, and that did not go ashore, were seized with hydrophobia on arriving in the harbours of Jamaica. I have also heard Mr. Colman mention that he has known hydrophobia *break out* from time to time in dirty kennels of hounds, in which it was afterwards unknown, when proper vessels for cleanliness were scrupulously adopted. I was also censured for another declaration, namely, that dogs sometimes inflicted the disease before they had given sufficient signs of hydrophobia to be suspected mad; in truth before any one could be justified in saying that they were labouring under the disease. Of this many examples have been related to me, not but that the dogs must have been diseased, or their saliva could not have been so vitiated as to produce the disease in those they bit, but that no outward and visible signs were observed in them at the time they bit. Now, singular enough, soon after this censure was written, a dog bit a child; I think in the neighbourhood of Lisson Grove. The child soon exhibited all the symptoms of hydrophobia and died; yet the dog remained to all appearance healthy, and was actually given to the charge of the person who passed this censure, to watch if it went mad. It was kept till the man to whom it belonged was out of patience and determined on having it killed. It was killed, still giving no sign of the disease, and on dissection such things were found to have been swallowed by it as, we are told, are generally observed in dogs afflicted with the disease. So that it was judged to have the affection, and therefore to have been able to communicate it by bite, and yet had developed no symptoms indicative of hydrophobia. I speak from memory, but fancy I am correct in the main points.

In regard to the treatment in this case, I had long ago determined to give iron a full trial in tetanus and hydrophobia. I had great hopes of its use in tetanus, because that is not a specific disease, but one of mere morbid excitability of a certain portion of the nervous system, and as iron has an extreme power over certain excitements of the nervous system, such as tic douloureux and chorea, I had great hopes of its success in tetanus. In two cases out of three I am almost satisfied that *it* cured the disease, and in the third the disease was too rapid for it to have time to produce any effect. A gentleman from the West Indies has lately informed me that he employed it there in ten cases of tetanus, and that out of the ten, eight recovered, while in the other two, the difficulty of administering it prevented all chance of success. I had not such hope of its utility in hydrophobia, because hydrophobia is a specific disease depending, in the human subject, upon a certain poison, for which an antidote must be found, and not upon mere morbid excitability. Still the chance was worth taking, and in this case it was fairly administered, and totally failed; so that it would be a waste of time ever to employ it again in this disease. He took nine ounces in the course of the eighteen hours he was treated in the hospital, without the slightest benefit. But the point is settled, and a full trial ought to be given in other cases to some other remedy which has not yet been proved to have failed although fully employed. In regard to guaco-juice, it may be worth while to state, that a man has been here several months with a violent pulsation of all the arteries, especially those of the head. Copious bleeding, and every medicine in the Pharmacopœia, and plan of treatment, failed. As a last resource I gave him the guaco-juice, since it was said both to tranquillise and to cure a whole catalogue of diseases. He took it for many weeks, and at last in the quantity of a pint a day, not only without benefit, but without the *slightest sensible effect of any kind*.

ST. THOMAS'S HOSPITAL.

INCONTINENCE OF URINE FROM INJURY TO THE SPINE.

Oct. 6. John Clark, sailor, was this day admitted, labouring under incontinence of urine, produced by an injury which he received in the loins about a month past, by the falling of a piece of timber on his back. The urine continually dribbles away, but the power of motion and sensation in his lower extremities is unimpaired. His health otherwise is good. *Empl. lyt. amplum lumb. regioni*—to be kept open by the application of the *cerat. lyttæ*, diluted with *ung. cet.*, ʒiv to ʒvi; *tinct. ferri mur.* ℿ xii. t. d.

9. The blister has been removed, and the surface kept open by the application of the ointment; this has so far improved the condition of the patient, that he is able to retain his urine for a longer period than he had been since the receipt of the injury. Continue remedies.

13. The function of the bladder gradually being recovered. The urine is now retain-

ed without inconvenience for one hour and a half or two hours; formerly he could not retain his urine for more than a few minutes. Blister still kept open, and *tinct. fer. mur.* continued.

16. The recovery of the patient may be now considered as completed; the command over the bladder is nearly perfect, and a very few days will suffice to enable him to be discharged. This case illustrates the marked benefit derived from blisters applied immediately over the injured part, when the spinal marrow has suffered from slight concussion. It may also throw some light on the mode by which urine is retained in the bladder during the state of health. Anatomy proves that the urinary bladder is not furnished with a sphincter, and that the urethra is equally destitute of muscular fibre; the nerves of the bladder are derived partly from the hypogastric plexus, and partly from the sacral; those filaments which pass to the neck of the bladder, and the muscles round the commencement of the urethra, are principally derived from the latter plexus; is it not then probable that these muscles have a considerable share in enabling us to retain our urine, since injury to the spinal marrow, which can only affect the spinal branches distributed to these muscles, is sometimes followed by incontinence of urine?

If it be true, as Magendie asserts, that contraction of the levator ani is the chief mean by which the urine is retained in the bladder, we have an additional argument from this circumstance; for all the nervous filaments distributed to the levator ani near the urethra, are exclusively derived from the sacral plexus.

MONOCLEPSIS.

To the Editor of THE LANCET.

SIR,—I have searched all the books to which I have access on diseases of the eye, but cannot meet with a description of any case attended with symptoms similar to the following, which has been under my care for the last fortnight, and an account of which I now send, for insertion in your much-esteemed Periodical, in the hope that some of your ingenious correspondents may be induced to favour the public with their opinion on it, and at the same time make known whether experience or reading has furnished them with any example of the kind, adding to their account a statement of the medical treatment and results.

John Frost, carrier, aged 48, of a stout make and rather plethoric habit, on his return from Exeter market, was seized with such a dimness of sight that he could not discern any object at the distance of a few yards, and was unable to keep on the road without holding by the end of his cart, though it was only about three o'clock P.M., and the day quite fine and clear. Before reaching his home, however, he found that on closing, or covering, *either* eye with his hand, he could see sufficiently well with the other. I was sent for to his house next morning, and found that he could scarcely perceive even the lines of a book when both eyes were open, but that on closing either of them he could read distinctly every word.

These symptoms were accompanied with considerable pain in the forehead, and a full, quick, and rather hard pulse; being a stout man, I took from the arm about 24 ounces of blood, gave him some compound *colocynth pills*, with a grain of *calomel* in each; two to be taken every three hours till the bowels were freely opened, and directed a blister to be applied to the back of the neck at bed-time. Next day I found the pulse softer, the pain of the head gone, but no alteration in the sight, either for the better or worse. In this state he continues, entirely free from pain, but still under the necessity of wearing a bandage over one eye, without which he cannot even see to walk. *Errhines*, and a little *spt. etheris sulphurici*, applied to the eyes twice a day since the application of the blister, always afford him *temporary* benefit. I cannot discover the slightest irregularity in the motions of the iris; the pupils seem neither more dilated nor contracted than they ought to be; the humours appear perfectly transparent and healthy, and there are no traces of either irritation or inflammation to be perceived. Whether the above anomaly portends the commencement of amaurosis, or is to be considered merely as resulting from a temporary weakness or relaxation of nervous power, I shall leave to the determination of the learned; but I cannot help thinking, that it strongly favours the opinion of those who advocate the existence of some *fluid essence* circulating in the course of the nerves, the influx of which, in this case, seems insufficient for supporting the action of both eyes at once, but enough when directed upon *one* of these organs to render vision complete.

I am, Sir, your most obedient servant,
WILLIAM REED, Surgeon.
Kentisher, near Collumpton, Devonshire,
October 20th, 1831.

CUPPING IN ASPHYXIA AND CHOLERA.

To the Editor of THE LANCET.

SIR,—My attention having been recently directed to the subject of suspended animation from drowning, &c., with a view of

deciding on the best means to be adopted towards resuscitation, I have determined when the next case occurs, in addition to the other means, to apply a considerable number of cupping-glasses (at first without the scarificator) to the chest, to the arms, and indeed, to any part of the body which presents a convenient surface. The idea was suggested to me from the favourable result which followed their application in cases in which it was desirable to relieve the oppression of the internal organs without diminishing the quantity of blood in the system generally. I have long been convinced that the relief we afford by the employment of leeches and cupping, is as much to be attributed to the drawing, as it were, a certain quantity of blood to the surface, as to the quantity actually abstracted. My object in troubling you with these remarks is to suggest to my medical brethren, through the medium of your widely-circulating Journal, the propriety of adopting the same plan in cholera asphyxia, not with the view of superseding the employment of the lancet or the scarificator; for it appears that it is not so much the question in these cases whether blood is to be drawn, as how to get it to flow in a sufficiently continuous stream. Now, Sir, it appears to me that by drawing a considerable quantity of blood to the surface by means of the exhausted glasses, we may so far relieve the over-charged state of the vessels of internal organs, as to enable them to react on their contents, and thereby sufficiently restore the balance of the circulation as to admit of blood being taken from a vein, or by means of the scarificator.

You will much oblige me by inserting this suggestion in your highly-useful Journal.

I am, Sir,

Your most obedient servant,

CHIRURGICUS.

October 24, 1831.

A copy of the first number of Professor Davis's work on the Principles and Practice of Midwifery, announced for publication in September last, is now before us, and we give it our most cordial recommendation to the profession. It contains an outline of the plan of the work, and, in pursuance of the highly-philosophical system of instruction which the learned Professor has adopted, commences with the subject of the pelvis, to an exposition of the anatomy and physiology of which the chapter is devoted. The printing and "getting up" of the number are of the very first order, it is illustrated by well-executed plates, and is published at so low a price as to be within the means of every practitioner and student. Our time will not admit of a further notice of the work at present.

TO CORRESPONDENTS.

We perceive the hardship of *William S.'s* case, but cannot help him.

The suggestion of *S.* is exactly that which most of our other correspondents have been advocating, and we do not therefore publish it; besides it is a communication which we should not do right unnecessarily to print. We may briefly state that he conceives an additional proof that increase of excitement in the cerebellum is the chief cause of priapism, to be found in the fact that "priapism is more frequent in an horizontal than an erect position, the former being the more favourable position to determine blood to the cerebellum."

Constant Reader. The person who employs the physician is bound to pay him for the analysis. On such occasions a distinct order should be obtained from the churchwarden or overseer. The charge is usually from *li.* 1*s.* to *li.* 5*s.*, that is, if the analysis be performed under the guidance of an adequate knowledge of the subject.

A Junior Student. In some cases the Apothecaries Company receive certificates of attendance upon lectures during the *last* year of the apprenticeship. In order, however, to prevent *mistakes* our correspondent had better apply at the Hall, and obtain a security for the privilege under the signature of the proper officer.

Anceps. They would require such attendance on a London hospital, if the *provincial* hospital be not one of the "recognised" establishments.

We repeat our question of last week:—Did *Allsharm* of Portsmouth, who wrote to us in April last, receive our reply to his note, as we did not hear from him a second time?

As every moment of the EDITOR's time is much occupied, he finds it exceedingly inconvenient to comply with the requests for personal interviews, but all questions of importance, proposed in writing, shall receive earnest and immediate attention.

J. F. C. will see that we have only had room for an extract from another letter on the same subject as his own.

The statement at the close of *Alpha's* last communication, that his papers on the cholera were concluded, was an error.

We have received *Mr. Ekin's* letter.

A correspondent signing himself *Y. O. SS. Z.*, replies to the position of *L. B. W.*, "that physicians have a right to exercise the choice of the tradesmen who shall furnish the drugs he may prescribe to the patient,"—that the liberty of choice belongs by *right* to the party who is to pay for the medicine, especially since the patient has a more vital, and a less pecuniary, interest in the selection. As to the "conscientiousness" of the recommendation, our correspondent adds, "I have filled several druggists' situations in the leading towns, and have witnessed many of these *recommendations*, and in no one instance have I ever known the M.D. to inspect the drugs and chemicals of the party to whom he has sent his prescriptions." This writer also is anonymous, but we believe his evidence is such as could be given in every similar case.

The letter of Professor Turner—the Defence of Professor Grant—the Views of Dr. Williams of St. Thomas's Hospital on Fever—the letter of Baron Heurteloup—and several other articles already received, will appear next week.

ERRATA.

P. 135, l. 46, for "operator" read *operation*, for "save" read *since*; col. 2, l. 11, for "ischia" read *ischii*.